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CollectionCam_DESERT

Live Feeds in Museum Collection Storage

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Abstract

CollectionCam

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CollectionCam_DESERT is an artistic research project exploring the connection between institutional and ecological precarity. It contrasts the controlled, closed system of museum storage with an adjacent, uncontrolled desert ecosystem. Both 'landscapes' are under threat, as changing climate and diminished funding portend an uncertain future. Storage is dark and rarely accessed. The desert horizon is mostly empty of infrastructure. CollectionCam uses live feeds to flatten the hierarchy between the remote environment of museum storage and the harsh desert landscape outside. It is in the collection, but it is also waiting to collect. The purpose is not to amass data, but facilitate a series of observations or impressions. The project waits for signs of permeability; it watches for a time when the walls break down. CollectionCam_DESERT is the first iteration of the CollectionCam project, which intends to expand into other institutions and ecosystems. Chapters 1 and 2 describe the aesthetics, ethics and objects in collection storage, and provide site-specific context for the project. Chapter 3 posits scientific monitoring as a model for observing collection storage, and proposes durational and institutional constraints as a methodology. Chapter 4 provides a theoretical background for speculative strategies in surveillance art and design and Chapter 5 presents storage as a speculative world.

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Preface

Museum collections exist in a curated ecosystem. Collection storage controls lighting, temperature, sound, air quality, flora and fauna or lack thereof. Outside storage walls, the surrounding ecosystem runs in parallel, with wildly divergent environmental conditions.

These parallel ecosystems exist in peril, under threat from changing climate, diminishing space, and dwindling public funds. Environmental monitoring is common in both locations. Data from collection storage remains staunchly private and guarded, while outside, environmental and governmental organizations monitor landscapes publicly. The project *CollectionCam* provides public monitoring of collection storage through live feeds, concurrent to public monitoring outside museum walls.

A live monitoring feed is a unique medium for capturing attention while maintaining a contemplative state. *CollectionCam* situates carefully walled-off collection storage in the surrounding ecosystem by superimposing live feeds atop one another. The viewer can toggle the view of inside and outside, mirroring an illusion of control (fig. 1).

The feeds monitor a static, mundane system of shelves, labels, paper and paint, comprising and protecting a collection of cultural artifacts as the outside ecosystem grows harsher and more threatening. They watch and wait for a future where the walls break down.

Figure 1. View of CollectionCam_DESERT, streaming at collectioncam.net.

"When an artifact forgoes its container entirely to be put on display, the institution must turn its attention to the object's next most proximate container, the room that holds it. Container, room, building, site, policy: these are a collections worker's levels of control. Put another way, these are the only things they can hope to control. Beyond them lies the world outside, a world no institution can manage. Wars, flood, and fire threaten today's most vulnerable collections, while better resourced institutions develop ever more pristine and hermetically sealed spaces. Modern art preservation is modeled on the idea that one can—and should—keep the world out." —Mal Ahern, "Conservation After Conditioning, Part I: Keeping the World Out," *E-Flux*, June 2024

Inside Collection Storage: A Controlled Ecosystem

Aesthetics of Storage

What does museum storage look like? Most art museums have between 2-4% of their collection on display at any given time.[1] The idea of transparency in storage is akin to the scientific idea of shared data, but remains unrealized in practice: as the valuable data of the museum — the objects in the permanent collection — are opaque. In communications with collections managers on the prospect of installing a live video feed in their storage for the project *CollectionCam*, they cite security risks (fig. 2) and the need to carefully control the environment as reasons to deny access. In addition, the appearance of some collections — including piles of unsorted boxes, signs of vermin, or poorly constructed rooms, as described by collection managers — renders storage unsuitable for public viewing.

[1] Fabrikant, Geraldine "The Good Stuff in the Back Room." New York Times, March 12, 2009, https://www.nytimes.com/2009/03/19/arts/artsspecial/19TROVE.html. Accessed Sept 22, 2021.

Figure 2. Art museums' responses to an email requesting an image of museum storage. Museums were chosen for their high visitation numbers relative to the size of the local population for a more even distribution across the U.S.

MUSEUM	YES/NO	EMAIL RESPONSE
American Visionary Art Museum	No	AVAM keeps any visuals of its collection storage private. I'm sorry I cannot be of more help.
Art Institute of Chicago	No	Unfortunately, images you have requested of our collection storage spaces are not publicly available due to security concerns.
Brooklyn Museum	--	*no response*
BYU Museum of Art	--	*no response*
Chinati Foundation	No	I checked in with our collections manager, and she said that we do not take images of our storage area for security purposes.
Chrysler Museum of Art	No	Unfortunately, we don't publicly share images of our collection storage as a matter of security.
Dia Art Foundation	No	I'm sorry we do not have any public images of our art storage areas.
Fine Arts Museums of San Francisco	No	Unfortunately, we are not able to share images of our storage due to security concerns.
Getty Museum	No	All documentation of this nature is considered confidential.
Guggenheim	No	Unfortunately, we do not have recent images, nor are we allowed to share historical images.
Hammer UCLA	No	Unfortunately, as a matter of policy, we are unable to provide any images of our storage space.
Harvard Art Museums	No	Unfortunately we do not have any images of our collections storage spaces that are publicly available.
Hirshhorn Museum	No	Unfortunately, it is against policy to provide images of secure areas.
Honolulu Museum of Art	No	Apologies, as a policy we never release images of Collection Storage.
Huntington	No	So sorry but we do not have any 'clean' photos of the Print Room that we are comfortable sharing.
Joslyn Art Museum	No	It is against our policy to share images of our collections storage spaces (as it is a security risk).
Menil Collection	Yes	Upon completion of a use agreement, the files would be forwarded to you.
Minneapolis Institute of Art	No	Typically we do not share images of art storage spaces for security reasons.
The Museum of Modern Art	No	Due to security reasons, images of the Museum's collection storage are not available.
Museum of Fine Arts Boston	No	For security reasons, the Museum does not release images of collection storage for publication purposes.
Museum of Fine Arts Houston	No	We do not have any images of our collection storage that is publicly available due to security concerns.
National Gallery of Art	--	*no response*
North Carolina Museum of Art	No	I wish I could help but for security reasons we cannot share images of collection storage.
Norton Simon Museum	No	I'm afraid the Norton Simon Museum cannot participate in your dissertation research, but it sounds very interesting.
Oklahoma City Museum of Art	No	Unfortunately, we do not know of any historical photos of our collections storage, nor do we have any current images available.

MUSEUM	YES/NO	EMAIL RESPONSE
Plains Art Museum	Yes	I attached some images of some different areas of our collection storage—let me know if you have any questions!
Portland Art Museum	No	We unfortunately don't have publicly available images of our art vault.
Portland Museum of Art	No	I'm so sorry, but we aren't able to provide images of our storage for security reasons.
RISD Art Collection	No	Unfortunately, we do not have images of collection storage publicly available.
Seattle Art Museum	No	I am afraid that SAM is unable to share an image of its collection storage; we do not allow photography in and of the area.
San Francisco Museum of Modern Art	Yes	I'm happy to offer images of our storage that can be found on our website.
Smithsonian American Art Museum	No	We don't publicly distribute images of our collections storage spaces due to security concerns.
Studio Museum	--	*no response*
The Baltimore Museum of Art	No	Unfortunately, they let me know that under most circumstances images are not released due to security concerns.
The Broad	Yes	Some images of The Broad's collection storage can be found here: https://www.schwartzsilver.com/projects/the-broad
The Metropolitan Museum of Art	No	I recommend using the "Search" function on the Museum's webpage to identify relevant material and images.
The Nelson-Atkins Museum of Ar	No	Unfortunately, I do not have any images to share in this area of the museum.
Virginia Museum of Fine Arts	No	Unfortunately we do not have any publicly available images depicting the museum's collection storage areas.
Walker Art Center	Yes	Here is a link to an article with several images of the Walker's art storage and the appropriate credit lines.
Walters Art Museum	No	Unfortunately, images of our collection storage areas are not publicly available.

The ecosystem of museum storage remains hidden. The Broad in Los Angeles is an outlier. The architecture of the building has been designed to provide a view of actual storage, rare in that it is not a static display but consists of racks of paintings that change over time as they are accessed (fig.3). However, this is still in essence not representative of the actual breadth and appearance of the majority of their storage. The chief curator of the Broad stated in regards to visible storage, “You end up curating your storage.”[2]

Figure 3. Visible collection storage at The Broad Museum, Los Angeles. Photograph by the author, taken November 2024.

[2] Finkel, Jori. “LACMA, Broad, other art museums work to put storage on display.” Los Angeles Times, July 20, 2013, https://www.latimes.com/entertainment/arts/culture/la-et-cm-lacma-broad-museum-storage-20130721-story.html. Accessed August 15, 2021.

The work of conservationists is underfunded; the yearly increase in the number of objects in the collection through bequests, as well as changes in the direction of collecting over time, present ongoing storage challenges.[3]

In a recent Frieze panel on museum display a curator stated, “you cannot expect people to want to *know*, unless they want to *look*.”[4] The power in the act of looking should not be reserved only for display, but also for storage. Piles of boxes or organized racks indicate the value systems of both the institution and the wealthy; their monumentality echoes the appetite for collecting and for preserving the past. Martin Feldstein wrote in *The Economics of Art Museums*, “certainly most museums have acquired items, often through donations and bequests, which they relegate to store as they do not match the standard of objects on display.”[5] Filmmaker Salomé Lamas offers a more pointed critique, asking, “What is entitled to be preserved? How can ordinary people or researchers access this patrimony? Who owns it? Why are some sections confidential? Who determines confidentiality? How high are the preservation and storage costs? What gets lost when Alexandria’s library burns down? It is humanity’s duty to collect, and to remember, but collections are limited, and someone is curating.”

Storage reflects the changing function of the institution. The Palm Springs Art Museum, where *CollectionCam* is currently installed, was founded as a natural history museum[6]. This is true of many of the major art museums in the US and Europe; founding collectors did not differentiate between art objects and natural specimens, as seen in the cabinets of curiosity that were precursors to museum collecting. The flattening of the value between a cultural object and a natural one is reflected in museum storage but absent in the hierarchy of display.

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[3] Feldstein, Martin, ed. *The economics of art museums*. University of Chicago Press, 2009.
[4] Higgie, Jennifer, The Aesthetics of Display, a panel, Frieze, October 6, 2017, https://www.listennotes.com/podcasts/frieze/the-aesthetics-of-display-w-1AWCcnlzG.
[5] *The economics of art museums*, p. 310.
[6] Palm Springs Art Museum, “Our Story,” *Palm Springs Art Museum*, accessed May 25, 2025, https://www.psmuseum.org/about/our-story.

Figure 4. Woodcut of Museum of Ferrante Imperato from *Dell'Historia Naturale* (1599) showing natural specimens (ceiling) alongside cultural objects (cupboards).[7]

Ethics of Storage

The tradition of the German *wunderkammer* or cabinet of curiosities (Italian version shown in fig. 4) was expressed by European founders of American art institutions as they amassed indigenous artworks and displayed them alongside scientific specimens without regard for their origin or provenance. The often violent nature of acquisition in a museum's founding objects has been repressed and reordered in storage. The Smithsonian contains roughly 10,000 human indigenous remains[8] that have not been repatriated, many in drawers in windowless rooms.[9]

Art museums that do not have remains in their collection often have cultural objects looted from graves, stolen, or otherwise obtained illegally or unethically. The

[7] B. M. Kelly, "Wunderkammer-a (Wunderkammer + Kamera)," *Interiors* 11, no. 1 (2020): 63–76, https://doi.org/10.1080/20419112.2020.1836806.
[8] Logan Jaffe, Mary Hudetz, Ash Ngu, and Graham Lee Brewer, "America's Biggest Museums Fail to Return Native American Human Remains," *ProPublica*, January 11, 2023, https://www.propublica.org/article/repatriation-nagpra-museums-human-remains.
[9] Kumari Devarajan, "Skeletons in the Closet," *Code Switch*, NPR, October 13, 2021, https://www.npr.org/transcripts/1045518876.

Metropolitan Museum of Art states, “When new information about collection items comes to light, we openly share it (if advised by Indigenous leaders to do so), or remove culturally sensitive items from view as requested.” But a 2023 report by ProPublica found many objects in the Met collection with questionable provenance and cultural significance that had not been returned.[10]

Museums have shown a renewed commitment to repatriation since new rules[11] went into effect in January of 2024 giving museums five years to return human remains or funerary objects.[12] . The San Francisco Fine Arts Museums states, “in April 2024, the Fine Arts Museums formally deaccessioned all Native American Ancestral human remains still in their physical possession and will repatriate the remains to affiliated communities.”[13] Many museums do not detail publicly which objects are in question. Museums including the Met and The Cleveland Museum of Art have removed or covered objects on display to comply with the new regulations. During the repatriation process these objects will likely disappear into storage.

Physical protection of objects in storage, and collection managers' careful recording of provenance, cannot undo the history of museum storage as not only prioritizing some histories over others but actively erasing. The act of record keeping as a form of slow violence has been made clear over the last century. The rot of the collection reflects the rot at the root of the American colonialist enterprise, and similarly benefits from exposure and transparency.. The artist Nicholas Galanin, who is Tlingít and Unangaŷ, created a video entitled *Who We Are,*[14] a rapid edit of images of 25,000 Pacific Northwest Coast Indigenous objects in museum collections. Galanin leaves the viewer

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[10] Kathleen Sharp, “Where Did the Met Get Its Native American Artwork?” *ProPublica*, April 25, 2023, https://www.propublica.org/article/the-met-museum-native-american-collections.

[11] U.S. Department of the Interior, “Native American Graves Protection and Repatriation Act: Systematic Processes for Disposition or Repatriation of Native American Human Remains, Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony,” *Federal Register* 88, no. 238 (December 13, 2023): 86472–86520, https://www.federalregister.gov/documents/2023/12/13/2023-27040/native-american-graves-protection-and-repatriation-act-systematic-processes-for-disposition-or.

[12] Zachary Small, “Leading Museums Remove Native Displays Amid Federal Rules,” *The New York Times*, January 26, 2024, https://www.nytimes.com/2024/01/26/arts/design/american-museum-of-natural-history-nagpra.html.

[13] Fine Arts Museums of San Francisco, “Fine Arts Museums of San Francisco Repatriate Three Funerary Objects to the Choctaw Nation of Oklahoma and the Chickasaw Nation,” August 15, 2024, https://www.famsf.org/press-room/repatriation-funerary-objects-choctaw-nation-chickasaw-nation.

[14] “Who We Are,” YouTube video, 1:30, posted by “Future Canoe,” March 31, 2006, https://www.youtube.com/watch?v=lF49l7S6FyM.

only enough time for superficial categorization, emphasizing relentlessness, scale and the forced anonymity of the institutional collection.

Undesirable Objects

In addition to objects that legally or ethically should not be in storage, there are many undesirable objects in storage. They might have been accepted through bequests or as part of a larger gift, and may not be in condition to be shown or not worth fixing, or even unidentifiable. “In any collection there will be left-overs that refuse to fit into a system, because research has not yet assured their classification, or their significance in cultural history is still disputed or has simply been forgotten for lack of documentation.”[15]

The process of deaccessioning is designed for such objects, but may not be a priority in institutions where funds are stretched. These objects can become a drain on other objects in the institution, and on the environment, as they take up space that is expensive to heat and cool, and are yet another item on a long list of work to be done by collections staff. In an interview Stefan Olah describes the work of collection staff as “all the more admirable because it will never be in the limelight. This is where you see the Sisyphean labour; when you’ve finished at one end, you have to start all over again at the other end. Despite all this, I could sense an almost symbiotic relationship between those in charge and their depots [storage] – rather like a garden and a gardener.”[16]

This project points to storage as a vessel for cultural data, a visual repository. The unseen objects are as important as the ones in the frame. A live feed shows the situation of storage as sleeping, rarely accessed, dark. When the room is lit many relatively recent artworks are in frame. The titles and histories of those artworks are part of the museum’s data store. The cam in *CollectionCam* is concerned with the paintings as a pile, not an exhibition, in the overlapping and flattening of their value, the dark room, and the hidden corners and cases out of view. The presence or absence of data is intuited not enumerated.

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[15] Oláh, Stefan, and Martina Griesser-Stermscheg, eds. *Museumsdepots: Inside the Museum Storage*. Salzburg: Verlag Anton Pustet, 2014.
[16] Oláh and Griesser-Stermscheg, *Museumsdepots*, 45.

Outside Storage: Site & Policy Context

The Palm Springs Art Museum is an oasis in a harsh desert landscape, where the average high in the summer months is over 100°F. Collection storage is climate-controlled to remain at 75°F. The museum is perched at the edge of city limits. A wilderness of low mountains bordering the museum is a mix of privately-owned and Local Government and Bureau of Land Management (BLM) land (fig. 5).

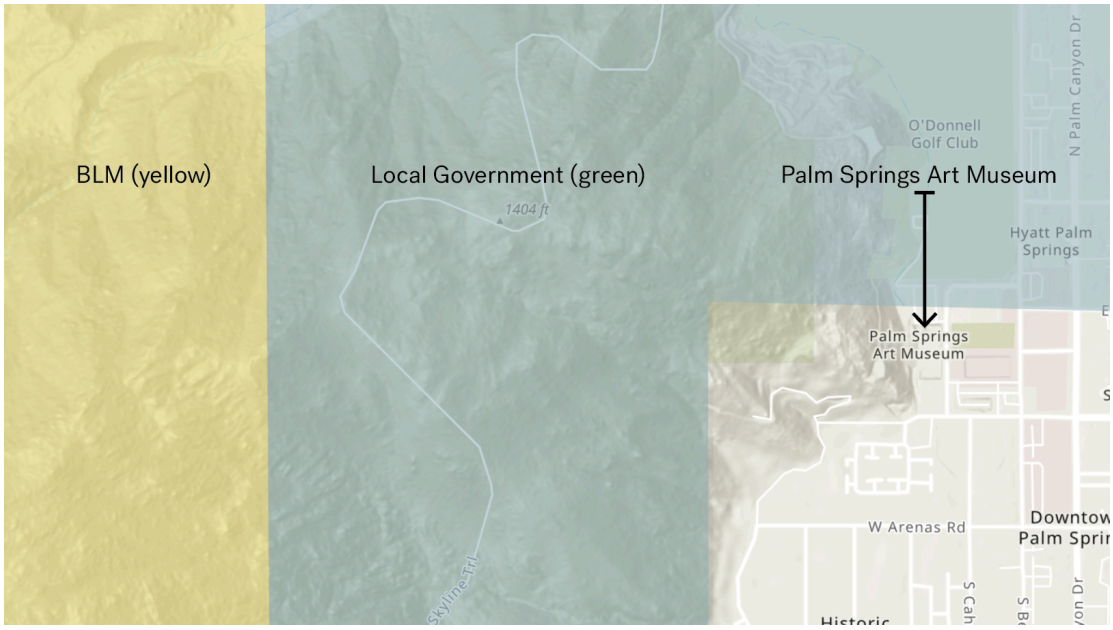

Figure 5. Bureau of Land Management (BLM) map of land management west of the museum.

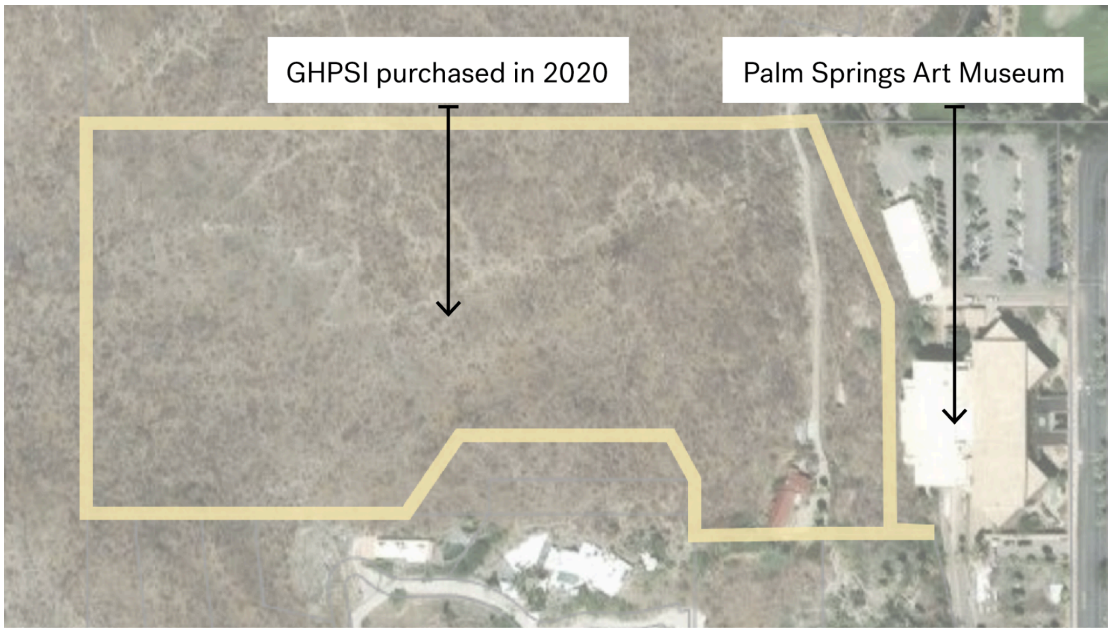

Figure 6. A tract of land purchased by a firm affiliated with developer Ron Burkle.

Ecological and Institutional Precarity

The museum collection ecosystem is under persistent threat. These threats include increasingly unpredictable natural disasters—fire, flash flood, smoke damage—and institutional pressures such as flagging funding, dissolution, development, and shifting land use. In 2020, GHPSI, an affiliate of The Yucaipa Companies LLC, an investment firm owned by developer Ron Burkle, purchased the historic O'Donnell House and Willows Inn,[17] including a large tract of undeveloped land immediately behind the museum (fig. 6).[18] Burkle is majority owner of the Soho House members' clubs. GHPSI has since been buying up properties to the south and west of the museum in preparation for a new Soho House location (fig. 7).[19]

Figure 7. Properties purchased by Burkle-affiliated investment group GHPSI, in blue.

[17] Melissa Daniels, "Billionaire Ron Burkle, Owner of Soho House, Buys Trio of Historic Palm Springs Properties," *The Desert Sun*, January 4, 2021, https://www.desertsun.com/story/money/real-estate/2021/01/04/billionaire-ron-burkle-owner-soho-house-buys-palm-springs-properties/4121909001/.
[18] Riverside County Assessor-County Clerk-Recorder, "Property Information for Parcel 513110054," accessed May 5, 2025, https://ca-riverside-acr.publicaccessnow.com/PropertySearch/Valuation.aspx?p=513110054.
[19] Riverside County Assessor-County Clerk-Recorder, *Official Records Search: Party Name "GHPSI"*, accessed May 25, 2025, https://webselfservice.riversideacr.com/Web/search/DOCSEARCH2111S1.

The museum is on land zoned “Central Business District,” downtown to the east is “Central Business District, Indian Land,” as it is owned by the Agua Caliente Band of Cahuilla Indians. South and southwest of the museum is zoned “Planned Development”. The Palm Springs Soho House project has recently stalled; it is unclear how Burkle will choose to proceed with the land, and whether his firm plans to buy up additional parcels.

To the north and west undeveloped land is zoned “Open Land” up to the city limits to the west, where BLM land begins. The Bureau of Land Management owns approximately 15% of land in the state of California. The camera providing the outdoor live stream to *CollectionCam* is located on privately-owned land; the camera has been installed to capture BLM wildland in the frame (fig. 8). Development and conservation of BLM land viewed on the cam and adjacent to the museum is covered by the *Desert Renewable Energy Conservation Plan* (DRECP) established in 2016. The use of the land has recently been contested. In January of 2021 President Trump initiated a rollback of conservation protections instituted under the DRECP. Trump’s amendments would have benefitted the development of solar and mining projects. One month later President Biden entered office and rejected Trump’s amendments.

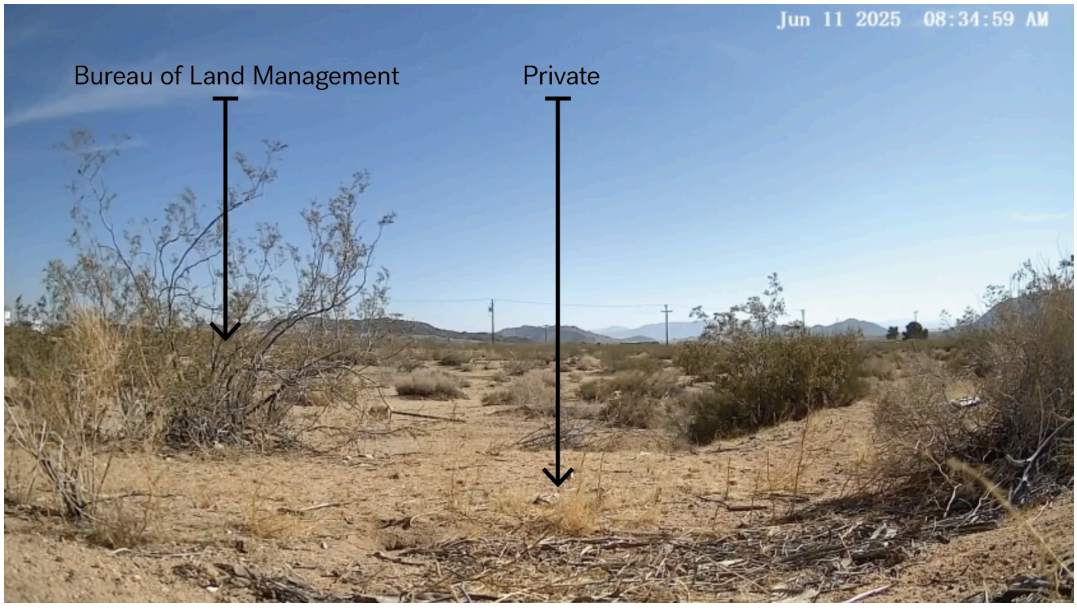

Figure 8. Land ownership, captured in the frame of the desert feed.

In 2025, the Trump administration is developing a new plan to sell off BLM land to build homes. The agency is looking at land within a radius of up to 10 miles of all cities and towns with a population greater than 5,000 people.[20] The acting Director of BLM states, "That's what we've identified as being available for sale," he said.[21] According to this definition, the 'underutilized' BLM land adjacent to the museum may be up for grabs.

The U.S. Fire Administration describes such land (fig. 9) as the wildland urban interface or WUI, "The WUI is the zone of transition between unoccupied land and human development. It is the line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels."[22] The Fire Administration cites a report entitled, *Communities at Risk,* by the National Associate of Foresters, that identifies the wildland urban interface as under increasing threat from wildfire.[23]

The sites in the project *CollectionCam* face twin threats common in the state of California: development and fire.

Site Ecology

The Coachella Valley Multiple Species Conservation Plan details local ecology as Sonoran mixed woody and succulent scrub. They host a map[24] (fig. 10) showing the museum overlaid with a blue sliver representing habitat for the Palm Springs Pocket Mouse, Jerusalem Cricket, and the Coachella Valley round-tailed ground squirrel. The Boutique Hotel-zoned land adjacent to the museum is designated habitat for Peninsular bighorn sheep.

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[20] Bobby Magill, "Trump Studies Selling 625 Square Miles of Federal Land for Homes," *Bloomberg Law*, March 2025, https://news.bloomberglaw.com/environment-and-energy/trump-studies-selling-625-square-miles-of-federal-land-for-homes.
[21] Magill, "Trump Studies Selling 625 Square Miles of Federal Land for Homes."
[22] U.S. Fire Administration, "What Is the WUI?" *U.S. Fire Administration*, accessed May 6, 2025, https://www.usfa.fema.gov/wui/what-is-the-wui/.
[23] National Association of State Foresters, *Communities At Risk: Fiscal Year 2021* (Washington, DC: National Association of State Foresters, 2022), https://www.stateforesters.org/wp-content/uploads/2022/06/NASF-2021-Communities-At-Risk-Report.pdf.
[24] Coachella Valley Association of Governments. *Coachella Valley Multiple Species Habitat Conservation Plan: Conservation Areas Map.* ArcGIS Hub. Accessed April 26, 2025. https://mshcp-cvag.hub.arcgis.com/datasets/b928ccef48524cd98a8957c854c2c062_38/explore.

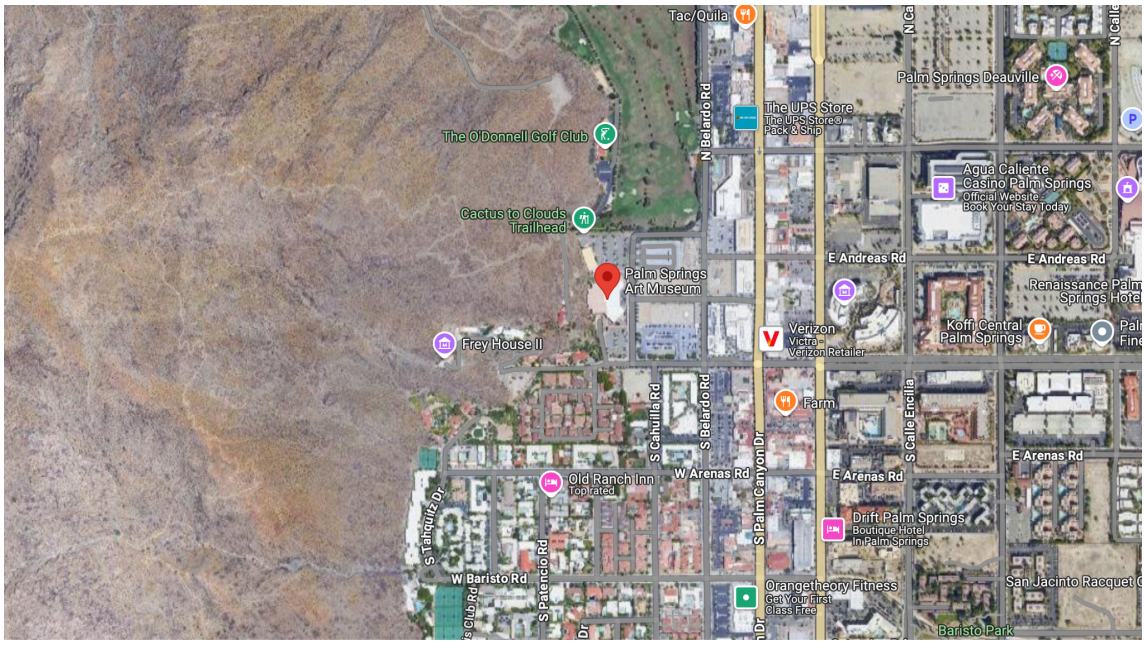

Figure 9. Palm Springs Art Museum, red icon, at the edge of the urban wildland interface.[25]

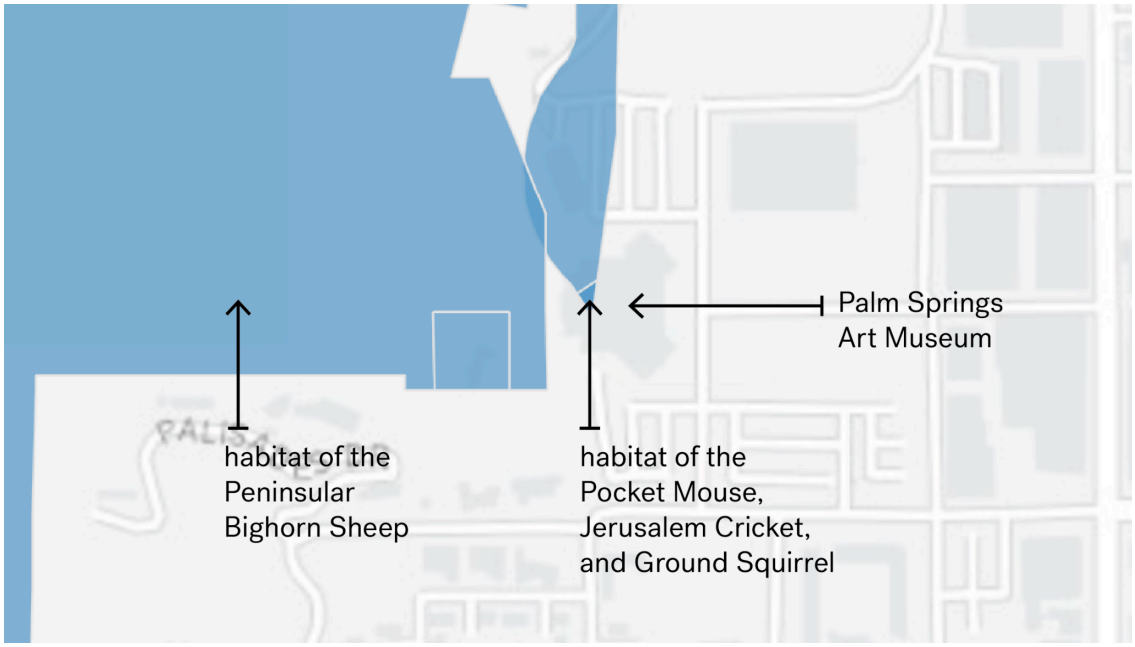

Figure 10. Habitat map of the Palm Springs Art Museum and environs. [CVAG, 2025]

[25] Google. "Palm Springs Art Museum." *Google Maps*. Accessed May 6, 2025. https://www.google.com/maps/place/Palm+Springs+Art+Museum/@33.8243181,-116.5557661,2172m/data=!3m1!1e3!4m6!3m5!1s0x80db1baff3d4f261:0xf5b5f9b369a4fe85!8m2!3d33.8242137!4d-116.5499366!16zL20vMGZjMXNw?

Project Structure and Intent

The unique location of the Palm Springs Art Museum at the edge of the wildland urban interface shaped the structure of the project. The cam inside the museum captures the collection. The cam outside places the collection in the surrounding environment. The outdoor cam displays an ecosystem that collections managers have successfully kept out. The squirrels, the sand, the desiccating wind. The cams do not exist in hopes of disaster occuring, they wait with expectation of slow change.

Scientific Monitoring as a Model for Collection Monitoring

Institutions monitoring changes in land, water and air use remote live video feeds as an interface between scientists, the physical world, and the public. Everyone sees the same feed, and scientists provide supplemental data or let the image speak for itself. *Air Quality Web Cameras*, a collection of very slow (4 fps!) live feeds run by the National Park Service, includes ozone and particulate matter counts, and still images denoting 'good' or 'bad' quality air for comparison to the livestreamed views.[26] Previously the cams were offered on the page without context; the general air quality was understood from simple comparison of skies from park to park (fig. 11). Through these cams, the public has a limited view of a place they likely cannot or will not access. With their own eyes they assess the real-time condition of that place. Scientific monitoring cams offer a kind of *sousveillance*, or bottom-up surveillance. Government entities or non-profits constrain what is being monitored in the camera frame, but the events occurring (or not occurring) on the live feed are purposefully not in their control. Cameras are not turned off during adverse events. A note on the Mt Rainier webcam stream reads, "The webcam occasionally gets bumped around and moved because of snow accumulations... If the camera is pointed up (aka, not looking at the river), this happened. I'll fix it when I can and when I'm in the park."[27] This transparency is literal, ie., the framing of the shot remains constant, unless altered by weather or by natural events like tree fall or snow. It is an assurance that once installed access to the view is mediated by the environment and not the institution.

[26] National Park Service, NPS Air Quality Web Cameras, accessed March 1, 2025. https://www.nps.gov/subjects/air/webcams.htm

[27] Mount Rainier Geology and Weather, Nisqually River at Longmire webcam, https://www.morageology.com/webcams.php. Accessed October 22, 2022.

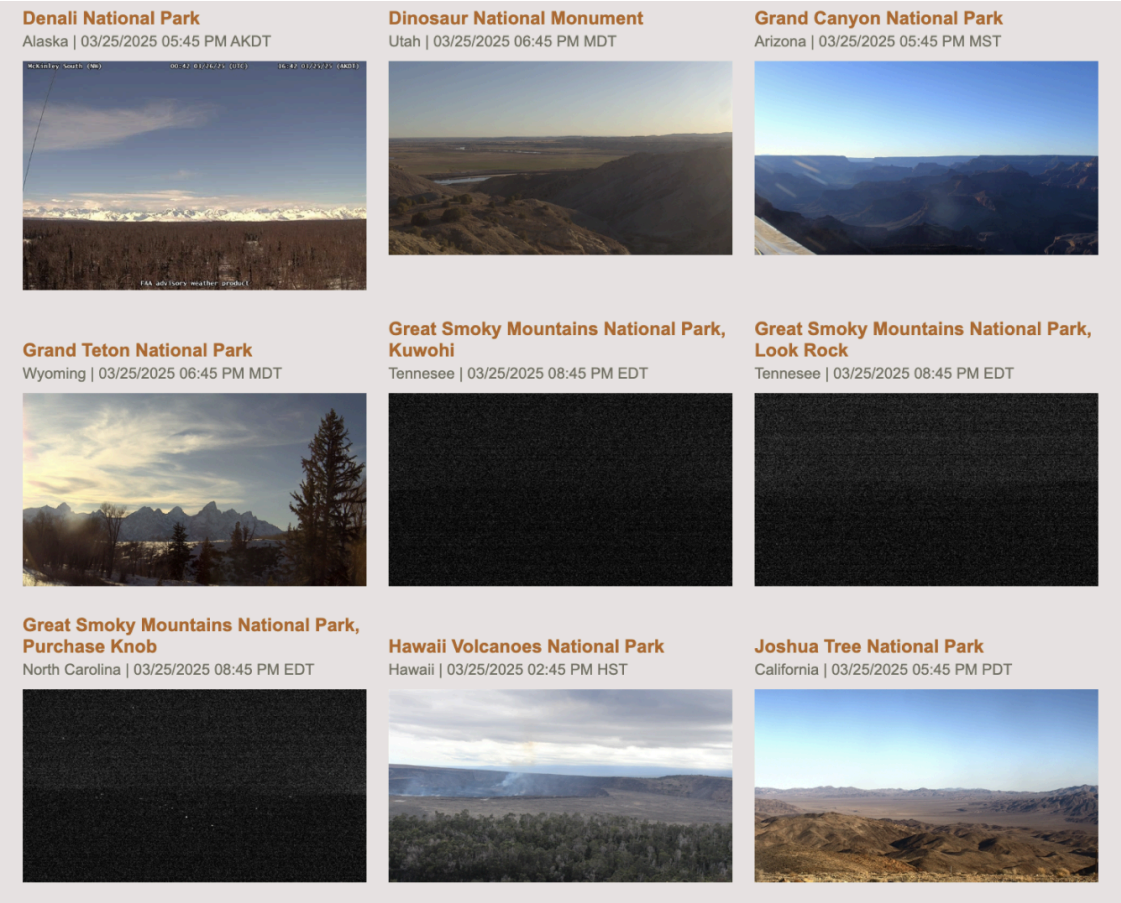

Figure 11. National Park Service Air Quality Webcams, uploading images since 2002.

Systems of Control

CollectionCam monitors museum storage as you would a glacier, over long periods of time, with hope of little change. Two parallel feeds, inside and outside the Palm Springs Art Museum, point to the permeability of the institution and the dream of a closed storage ecosystem. The feeds are streamed on Twitch and superimposed on one another at *collectioncam.net* (fig. 12). Upon visiting the website the viewer is presented with a toggle inviting the viewer to transition between an 'inside' view or an 'outside' view. The collection view (inside) is often almost completely dark, except for a small rectangle of light, as storage is visited infrequently. Occasionally a project in the museum will require daily use of the room. The desert view (outside), in contrast, is usually alive with movement in the form of a soft wind in plant life, small animals such as mice and squirrels, or loose dogs. The temperature indicates the extremes outside that can be felt but not necessarily seen. The cameras witness each day and night, watching and waiting.

Figure 12. View of collection storage when occupied, squirrel at left (see video in appendix).

Technical Challenges and Solutions

Continuous live streaming presents technical and practical challenges. Some challenges are due to low bandwidth and unstable internet–especially in remote locations. But many are structural–consumer surveillance systems typically rely on closed, subscription-based models. Security camera hardware and software are often not designed to be streamed outside the ecosystem of the brand that created them, such as Ring (owned by Amazon). In terms of hardware, it is increasingly rare for cameras to support open streaming protocols like RTSP or RTMP, many lower-cost manufacturers have phased them out entirely. Most off-the-shelf consumer cameras require users to access footage exclusively through the company's proprietary interface or app. The closed ecosystem of streaming cams mirrors that of museum storage. Storage of footage in 'the cloud' refers to a physical data center that is environmentally controlled much like collections.

Stream Length

Streaming platforms like Youtube and Twitch often shut off continuous live streams after a certain period of time. Youtube does this consistently at around 11 hours and 55 minutes, though it offers an application for longer streaming times with an arcane approval process. Twitch is inconsistent with stream cutoffs, a broadcast may go on for days and then end seemingly at random. Youtube hosts some of the most popular continuous animal-monitoring streams on the internet, suggesting that these must have passed their approval process.

Cost and Installation

Another challenge to high-frame-rate remote streaming for individuals is cost. Setups used for stable remote streams like the Big Bear Eagle Cam[28] (fig. 13) use expensive Axis cameras and cost-prohibitive batteries. The batteries are quite heavy and large, limiting where they might be installed. For ongoing remote streaming, land ownership and privacy is also an issue.

Figure 13. The Big Bear Eagle Cam.

[28] Explore.org, "Big Bear Bald Eagle Live Nest - Cam 1," YouTube video, accessed May 31, 2025, https://www.youtube.com/watch?v=B4-L2nfGcuE.

Desert Cam Hardware

The artist has access to the desert cam hardware to deal with any problems that arise on site, such as weather and animals damaging the camera or theft. For this situation, the camera needs to be easily replaceable. Eufy Cams are a low-cost option, but the newer Eufy cams do not allow RTSP. They would not be appropriate for museum storage as Eufy has admitted in the past that their cameras were streaming unencrypted to a server without customer's knowledge or permission.

Museum Cam Hardware

The museum cam uses a cinema-grade camera, a ZCam-E2C, which has an unusual feature for cinema cameras; it is designed for stable continuous streaming. The ZCam forgoes platform mediation on the camera-side beyond focusing and other useful traditional camera attributes, that is, the ZCam software is designed to connect to OBS, rather than prevent that connection like many other cams. At the museum the ZCam is connected to reliable internet via ethernet cable.

Some of the most stable scientific monitoring feeds use Axis cameras specifically for outdoor wildlife and environmental monitoring (see figure 14, a camera setup used by Explore.org, a popular wildlife streaming platform).[29] With the addition of supporting hardware, these cameras are very stable, but they were inappropriate for this project as they are visually unmistakable as a surveillance camera (fig. 15). The associations with surveillance and especially workplace surveillance were undesirable and could threaten the longevity of the project, so another type of camera was sought for the museum location.

[29] Explore.org. "Behind the Live Cams of explore.org!" *Explore Blog*. Accessed May 31, 2025. https://blog.explore.org/check-out-explore-behind-the-scenes/.

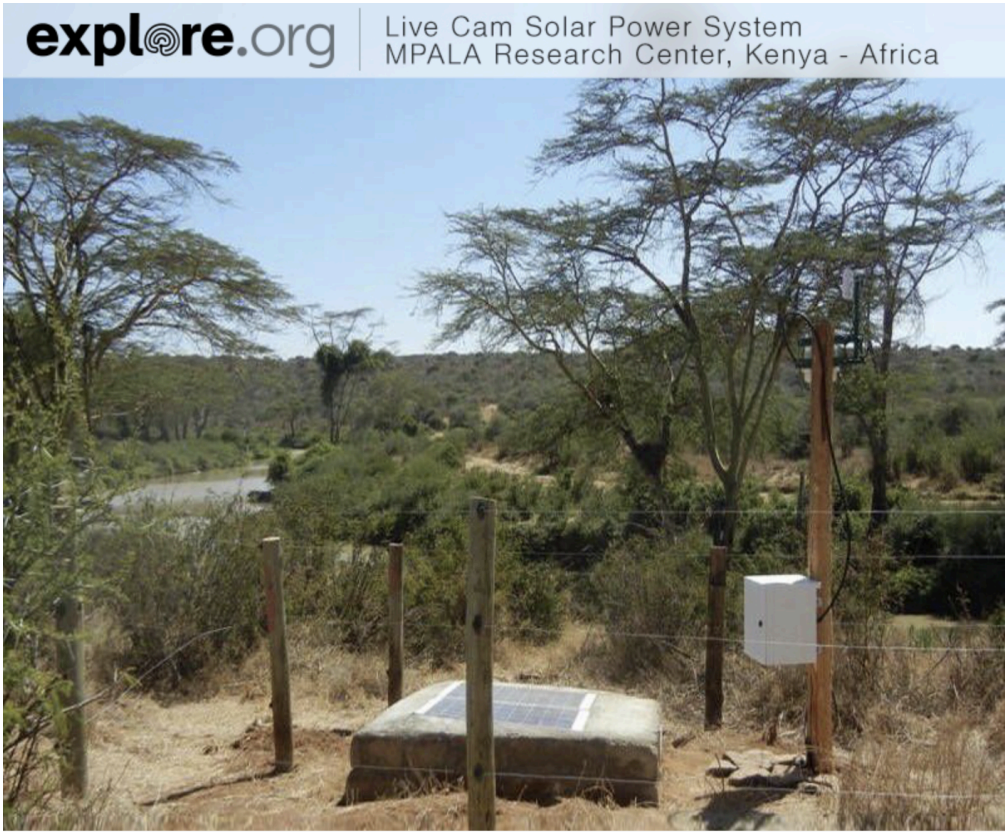

Figure 14. Solar-powered camera setup used by explore.org. Camera on pole.

Figure 15. Typical Axis camera used for outdoor wildlife monitoring.

Scripts

To maintain continuity, the project uses a series of automated scripts. These scripts differ based on the computer's operating system and hardware constraints. For the *desert feed* (fig. 16), which runs on an older Mac, two scripts are in use: one that restarts OBS every five minutes to counter Twitch's stream drop issues, and another that restarts OBS after a power failure. For the *museum feed* (fig. 17), a similar restart script ensures continuity after shutdowns or restarts.

Unlike traditional scientific monitoring cams, the remoteness of storage is human-imposed (walls, security, permission etc) and is not a product of geographic remoteness or harsh conditions. The environment is stable by design, the main issues are: security and privacy concerns and institutional limitations. The biggest threat to the project is from another institution: the ZCam-E2C is owned by the University of Washington and must be returned upon completion of this dissertation.

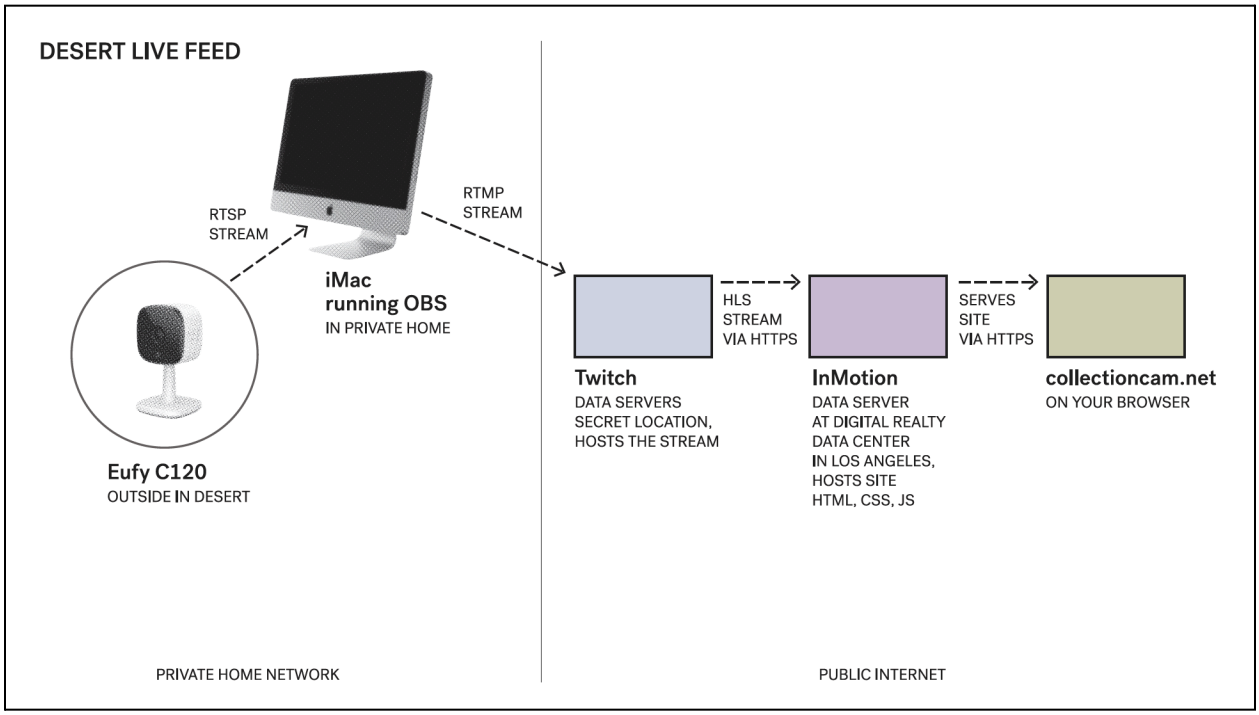

Figure 16. The outdoor desert camera is cheap and easy to replace if stolen; an old iMac repurposed for the project runs the camera feed through OBS and connects it to Twitch. Twitch hosts the stream and InMotion displays the site code via internet browser.

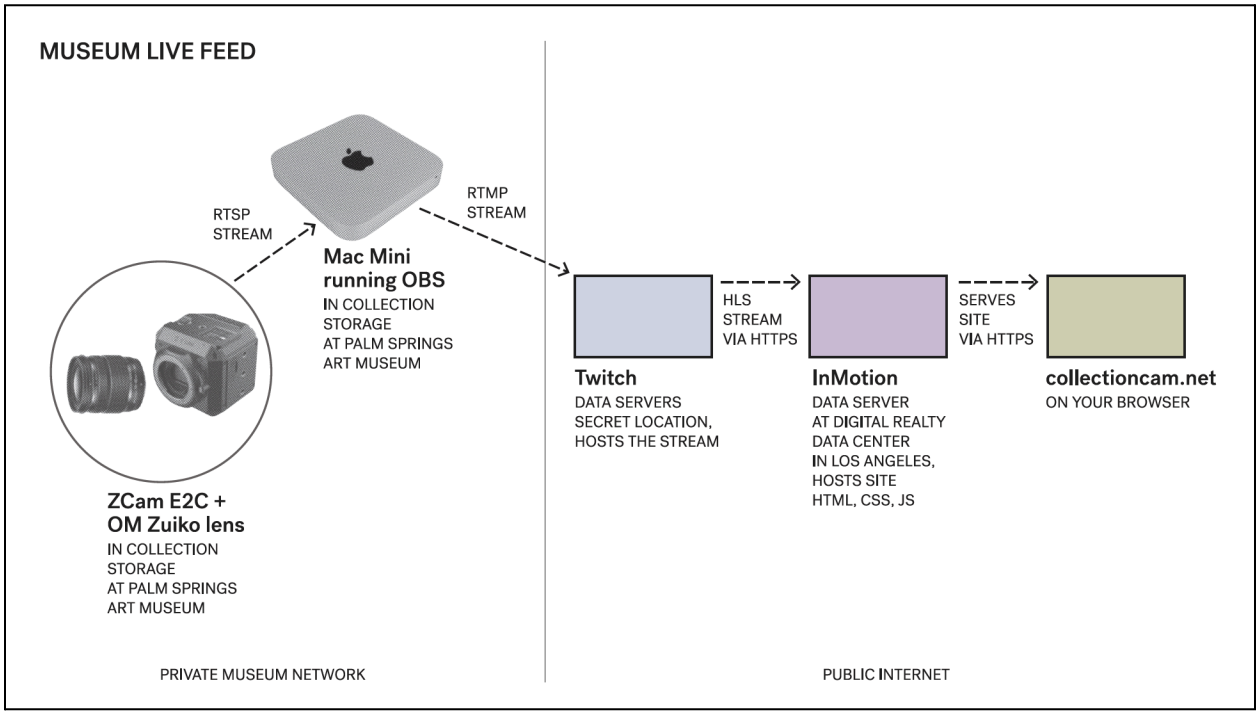

FIG 17. The museum camera is of a much higher quality than the outdoor cam, cinema grade. The MacMini runs the camera feed through OBS and connects it to Twitch outside the museum walls. Twitch hosts the stream and InMotion displays the site code via internet browser.

Passivity, Fragility and Duration

The author Elvia Wilk writes in *Death by Landscape*, "The word *landscape* is typically used to suggest the passive, the inert, the natural—the plant, animal, and mineral world that constitutes a backdrop for a human actor. But here, the sudden absence of a human actor occasions a sudden presence: the presence of landscape, the presence of plants."[30] The project is passive, it is waiting for something to happen. This event may be far off, some unnamed disaster, or it might be very near. This passivity is dependent on duration. The waiting is extended and foregrounded. The equipment used in the project, the sites chosen, the view of the cameras, and the constraints placed collaboratively on the project are all with the goal that the view will endure. With some irony this has meant a view that is regularly interrupted by internet and power outages and collection and IT staff intervention. In stops and starts coordinating with other institutions, timing was often cited as an insurmountable obstacle. To embed in the institution, the project needed to yield. When approaching the Palm Springs Art Museum, it was with the constraint there would be no schedule imposed on the museum.

[30] Wilk, Elvia. *Death by Landscape.* New York: Soft Skull Press, 2022.

The goal was to place a live feed in storage, with enough objects in view to render each one insignificant; secondary to the view of the whole. The difference between the inside and the outside is primarily one of temperature, light, and wind. Sound, precipitation, and humidity are mostly notable by their absence. The live feed outside can be seen as a metaphor, but it points to a real situation.

Institutional Constraints

Collections staff are stewards of the museum's objects. They are by design conservative. Over the past two years, the project met with a resounding no at many institutions (fig. 2). Rachel Faust, Director of Collections and Exhibitions at the Palm Springs Art Museum, agreed to allow the installation of a live feed in storage and greatly contributed to the author's understanding of the role of collections staff and the evolution of a collection over decades of management. The choice to contact collections, rather than curatorial staff, was deliberate. The project sought an agreement between equal parties, not imposed by a separate department or entity. It was essential to get permission from people working in the space or anyone on staff that may be filmed, and to alter the project according to their ongoing feedback.

The agreed-upon constraints that allowed the project to go forward were as follows:

—The frame of the camera is tilted to avoid the central worktable.
—Audio is turned off for the duration of the project.
—People in the room know the location of the camera and the view.
—Staff can turn off the camera at any time and for any duration.
—The video will not be continuously recorded.

For reasons unknown to the artist, the camera is often regularly turned off for a few hours on the weekends, and sporadically at other times.

The equipment in the museum installation was chosen for aesthetic and practical reasons. A cinema camera was used to avoid overt associations with surveillance. A larger, higher quality camera and lens, along with a purpose-built shelf, gives

the setup more authority. It is high on the wall, and though staff knows it's there, it is unobtrusive (figs. 18, 19).

The project was installed in museum storage in 2023. The conversation is ongoing as to whether the stream will be shared on the museum website and if so, what context will be given. Tension in providing access is a part of communicating with collection departments. The need to protect the condition of storage from prying eyes can be insurmountable to providing access. The constraints opened up the project to a wider perspective. As institutions are threatened, methods of critique expand to include the reality of their tenuousness, and that of the surrounding landscape and ecosystem. Though the ethos of storage is exclusionary, in reality there is a world outside.

Figure 18. above, installation high on the wall in the Douglas Vault

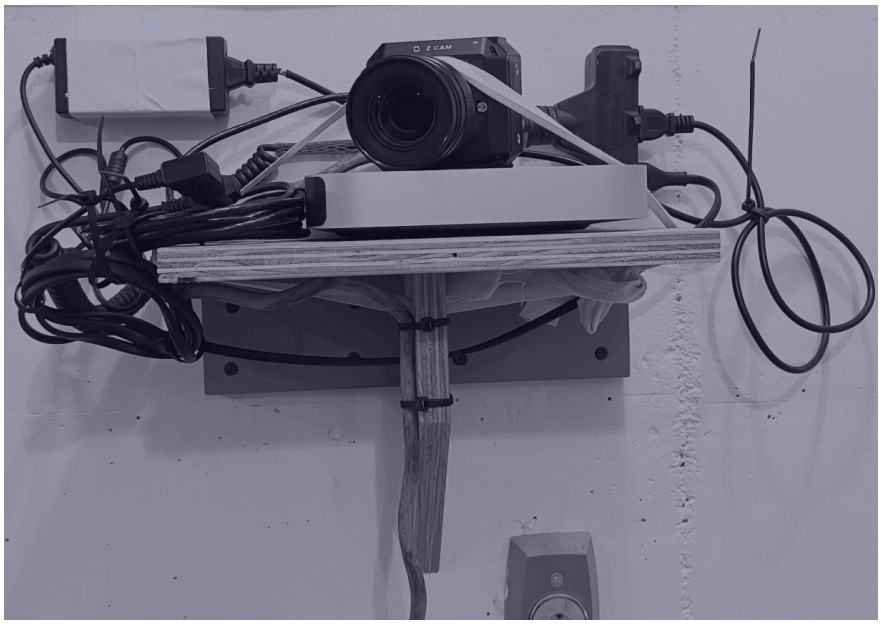

Figure 19. below, detail of secured equipment

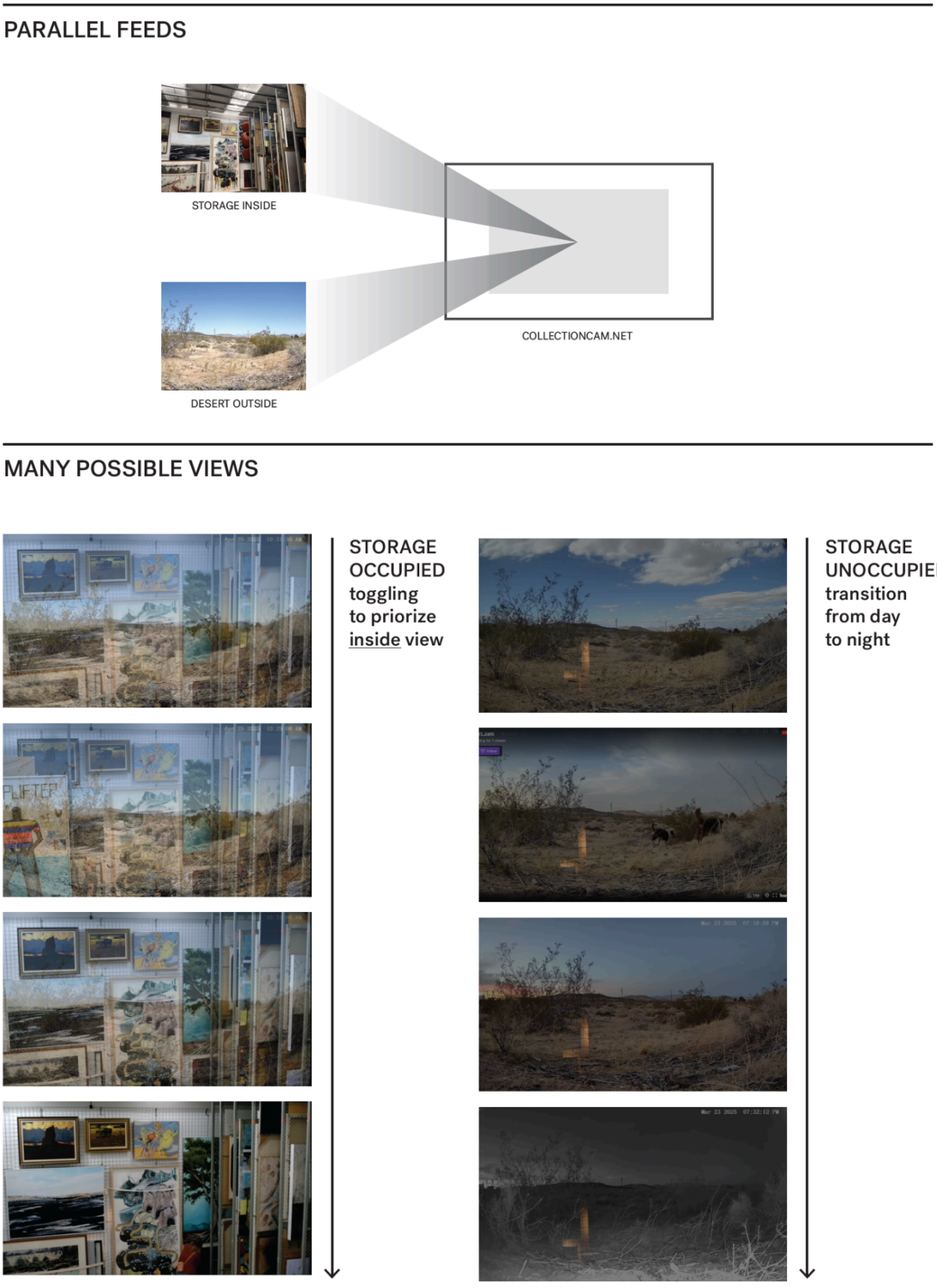

Figure 20. Contrasting views at collectioncam.net.

Surveillance & Speculation

The art historian Carrie Lambert-Beatty writes:

> *"Parafiction is related to but not quite a member of the category of fiction as established in literary and dramatic art. It remains a bit outside. It does not perform its procedures in the hygienic clinics of literature, but has one foot in the field of the real. Unlike historical fiction's fact-based but imagined worlds, in parafiction real and/or imaginary personages and stories intersect with the world as it is being lived. Post-simulacral, parafictional strategies are oriented less toward the disappearance of the real than toward the pragmatics of trust. Simply put, with various degrees of success, for various durations, and for various purposes, these fictions are experienced as fact."*

Streaming and Authenticity

The real-time generation of images via live feeds creates a slippery relationship between the viewer and the subject. The tension between fact and fiction stemming from a heightened sense of reality can make live feeds more watchable than an in-person view of the same scene. A live view is different from a photograph or a very recent still image. Around the same time as the popularity in visible storage surged, Thomas Campanella wrote, "contrary to projections that computer-based virtuality would abrogate traditional qualities of place and diminish our attachment to particular real-world environments, webcams prove that we are actually using networked computers to give real places new meaning in the cybernetic world."[31] In 2000, webcams were just beginning to be built into laptops and desktops as a default tool. The live quality of the webcam, seen through pixelation, distortion and extremely low frame rates, emphasized the reality of places that remained out of reach. Since then, cameras and internet connectivity have increased in quality and affordability to the point that consumers have the same access to record remote video and stream it online as government institutions.

Today, streaming video in remote locations still looks different than pre-recorded video, this is part of the magic; lag, lack of crispness and occasionally obscured views on

[31] Campanella, T. J. (2000). Eden by wire: Webcams and the telepresent landscape. In K. Goldberg (Ed.), The robot in the garden. Telerobotics and telepistemology in the age of the internet (pp. 22–46). Cambridge, MA: MIT.

remote cameras imbue images with authenticity. Scientific monitoring cams can act as the eye of a large institution, but many monitoring cameras are operated by citizen scientists or small nonprofits. They form a loose network, often displayed on utilitarian websites that may not have the resources to engage with recent developments in web design or frequent updates. The rawness of the data and the nature of the live feed feels *real*, especially in a time of AI generated images and video.

Francis Alÿs' artwork *The Nightwatch*,[32] staged in 2004, involved filming a fox released into the empty museum galleries of the National Portrait Gallery using their existing CCTV system. This project is part of a body of work by Alÿs centered on the act of walking; the title references the 1642 painting by Rembrandt which has a hint of motion. The contrast of the lively fox with the motionless, deserted gallery highlights the museum space as a highly controlled and surveilled environment (fig. 21). The pixelation and glitched motion of the CCTV imbues the image with a sense of realness.

Figure 21. Francis Alÿs' *The Nightwatch*

[32] Alÿs, Francis. The Nightwatch, 2004, https://francisalys.com/the-nightwatch/. Accessed Oct 22, 2022.

Figure 22. A fox wanders into the frame of *CollectionCam*.

The knowledge that something is live, that it is happening very close to RIGHT NOW, inspires a different mode of watching, similar to slow cinema or contemplative viewing.[33] Rhizome's Net Art Anthology describes the collective *Corpos Informaticos*' webcam networks: "these encounters did not extend or expand the body itself as much as the consciousness of participants—in particular, encouraging the dissolving of boundaries among self, other, and environment."[34] The sense of telepresence, or being elsewhere in the present, heightens the experience. People describe watching the Big Bear Nest Cam even after the eagles had departed for weeks, "For long stretches of the day the eagle nest sits empty, and yet a thousand or so people still watch.[35]

CollectionCam presents an 'empty' set of feeds, one location often barely visible and the other a landscape devoid of people. Live feeds used in art have a long history associated with performance. Feeds from inside a museum as part of a work are uncommon. Hito Steyerl held an event during the pandemic entitled *4 Nights at the*

[33] Thomas Elsaesser, Stop/Motion in Eivind Rossaak (ed). Between Stillness and Motion: Film, Photography, Algorithms. p117. 2011.
[34] Net Art Anthology, *Telepresence 2*, Corpos Informáticos 2002, accessed March 17, 2025, https://anthology.rhizome.org/telepresence.
[35] How Watching Bald Eagles Build a Nest Prepared Me for the Pandemic, Jonah Weiner, The New York Times Magazine, May 12, 2020, accessed March 17, 2025, https://www.nytimes.com/2020/05/12/magazine/how-watching-bald-eagles-build-a-nest-prepared-me-for-the-pandemic.html.

Museum, where a live feed captured lectures and tours in relation to her exhibition *I Will Survive* at the Museum of Modern Art. It was streamed online and purported to 'prove that there is nothing going on inside the museum.' *CollectionCam* too wishes to engage with this type of 'proof of life' service in monitoring the action in the vault. The action is so rare that the work feels more like an empty stage than an ongoing performance. The project prioritizes landscape first, collection second, human visitors last, though they dominate when in frame.

Iframes and the Handmade Web

Olia Lialina's work *My Boyfriend Came Back from the War*[36] (1996) still stands as one of the most recognizable works of the 'handmade web.' At the time, the internet was 'handmade' by necessity as content management platforms (CMS) were not in widespread use; the web was hand-coded (today's parlance) in html. This work resonates as it captures much of what the web has lost through platformization. This is something more than nostalgia, but a desire for roughness, texture and slowness online, a desire for the online space to feel more 'real'. Roughness exists today in images and video rendered on the browser, and not in the architecture of the web itself; in the still shadowy, pixelated journeys on Google Street View, the glitches, lag, high contrast and low fidelity of remote live feeds or zoom. When the real is contested, mediums where it can be felt become more valuable.

In a Youtube walk-through of his online exhibition, "*Quiet Calm, Staring*" Rafäel Rozendaal describes[37] another work by Olia Lialina, *Summer,* (fig. 23) which shows a person on a swing (Olia), moving jerkily on a blue to white gradient background.

> "She is trying to recreate the loading speed of the internet that we were used to in the mid-90s. Now that everything is so fast, everything loads instantaneously. So what she did is take the frames of an animated gif and spread them out over different servers. And because every time you call a different server, there is a delay that means the movement of the animated gif is slowed down and

[36] Olia Lialina, *My Boyfriend Came Back from the War*, 1996, accessed June 1, 2025, http://www.teleportacia.org/war/.
[37] Rafaël Rozendaal, *Quiet, Calm, Staring – an online exhibition (tour) at Upstream Gallery)*, YouTube video, 17:26, posted April 10, 2020, https://www.youtube.com/watch?v=7M3PoXQlCvQ.

unpredictable. The computer influences the movement, it is a different kind of movement than traditional moving image media."

Figure 23. Olia Lialina's *Summer*, 2013.

The 'different kind of movement' Rozendaal describes is present in remote live feeds; the moments of stuttering or dropped frames, or even dropped feeds, bring more pleasure to stretches of uninterrupted, cinematic slow viewing. This is strongly felt when something unexpected occurs on the feed. In *CollectionCam* the smoothness of the video is calming at dawn and dusk, as in person, but can be riveting in rare moments when animals stare into the camera, breaking the fourth wall, or when someone enters the frame in the collection. Like any stage the frame is activated by players.

In the same exhibition, a work by Jonas Lund records and displays the different browser sizes of people viewing the work online. Rafäel states,

> "There's an element of surveillance, but there is also an element which is... how do you think of composition in a browser? Composition is a starting point in any medium, what is the size of my canvas, what is the size of the piece of marble for the sculpture, how big will the sculpture be, how long will the video

> be? On the internet it's very different, when you make browser-scripted work, you don't know what the size is, you don't know what the duration is. This work is recording the unpredictability of the size of the internet. The internet doesn't have a fixed size... We don't have control over how a viewer sees the work."

Live feeds are often consumed on Youtube or Twitch, straight from the platform. When consumed elsewhere, it is through an embedded iframe. Iframes are a relic of the past, but are still in widespread use, nothing better has come along. Embedded live feed iframes present a consistent view, the styling of the original platform including number of viewers, likes, and colors can only be somewhat limited in html and not turned off completely. Iframes allow platforms to continue to colonize even 'handmade' corners of the web. They keep the internet, if not at a fixed size, in a fixed state of looking. The live feed carries this baggage, but it also retains its status as a portal into another world. The knowledge of the realness of something happening live is an antidote to passivity in viewing, even as it is a passive way of capturing.

Disaster Cinema

monitoring: waiting and anticipating the capture of an unknown future

Live feed cameras used for scientific monitoring range from the more exciting and action-packed: nest cams, like the aforementioned Big Bear Eagle Cam or predator cams, like the Katmai Bear Cams[38], to the more quotidian and anti-action: the National Park Service Air Quality Web Cameras, the Barrow Sea Ice Webcam[39]. The former tend to be at least 30 frames per second, while the latter stretch the definition of live with a trickle of stills, typically 10-12 frames per second or much longer. The Barrow Sea Ice Webcam is 1 frame per 240 seconds (fig. 24).

Figure 24. Barrow Sea Ice Webcam

[38] Katmai Bear Cams, accessed March 17, 2025, https://explore.org/livecams/brown-bears.
[39] Barrow Sea Ice Webcam, accessed March 17, 2025, https://seaice.alaska.edu/coastal-ice-observations/utqiagvik

Figure 25. James Williamson, *Fire!*, 1901.

One of the first disaster films was *Fire!* (1901),[40] a study of a burning house (fig. 25). Each long take in the four-minute film shows a different stage of the fire, from smoke billowing from the windows to an inhabitant being overcome by smoke. Given the right conditions, slower-frame monitoring cameras in use today also capture urgent and devastating scenes. Many webcams were engulfed during the recent wildfires in Los Angeles, filming their own destruction. In 2024, a camera from UCSanDiego's ALERTCalifornia public safety program filmed the Line Fire, showing distant flames that eventually reached the camera in a Stan Brackage-like onslaught of red and orange abstraction, the outline of some final trees barely visible in the last few frames (fig. 26).[41] As the last bits of ash hit the camera lens, there is a sense of bearing witness.

[40] *Fire!*, film by James Williamson, 1901.
[41] Camera records its own destruction by Line Fire in California, ALERTCalifornia, UC San Diego, Fox Weather, Sept 10 2024, https://www.foxweather.com/watch/play-75f6910e30009e9.

Figure 26. UC San Diego ALERT California cam films the Line Fire before being engulfed.

Monitoring feeds can come with a sense of impending doom, even as their viewership remains hopeful. The feeds function as data for scientists, but for the lay viewer they are accepted as an unmediated view of the world. This is a view even more 'true' than a documentary as it is not only seen with our own eyes as it happens, but with the knowledge that there is no camera operator. The viewer becomes the operator each time they choose to view; the disaster is in our control.

Parafiction and Critique

Parafiction is a speculative strategy that blends fact and fiction. Surveillance footage has an inherent relationship to parafiction in that surveillance cameras purport to capture reality. But our interpretation of what is occurring on camera already introduces a fictive element.

In their parafictional video *My Blue Window*,[42] American Artist situates the viewer behind the wheel as they assume a police POV, driving around a nondescript city. What might otherwise be a mundane drive in a semi-industrial area is imbued with anxiety as a police siren continually blares; a graphic overlay onscreen indicates that rape,

[42] American Artist. *My Blue Window.* 2019. Exhibition at Queens Museum, New York, 2019. Excerpted in "VLC Seminar 4: Reimagining Protocols: Reclaiming, Challenging, and Queering Surveillance." Vimeo video. Posted by Vera List Center, February 10, 2021. https://vimeo.com/510857004.

robbery, grand larceny and assault are taking place in the area, as a map displays the live location of the crimes. The video ends as a message flashes ‘CRIME DETERRED,’ as though the relentless prowl has had the desired outcome.

My Blue Window takes on the appearance of surveillance video to subvert the power dynamic between police and bystander. The people in the video are ‘surveilled’ by the artist, but their agency is reclaimed by the viewer who is put uncomfortably in the driver’s seat, taking on the police view.

The word ‘FORECASTING’ appears on screen as a moving, textural graphic, mysteriously generating new criminal leads (fig. 27). American Artist describes how the police use the word forecasting instead of ‘predictive policing,’ employing language that sounds rational or scientific to imbue their work with a sense of objectivity. Along the same lines, geography and mapping are also used as a way for police to legitimize their response as objective and not racist.

Figure 27. Screenshot of American Artist presenting My Blue Window on Zoom, displaying the word FORECASTING.

American Artist re-appropriates map graphics and a pseudo-objective dynamic interface to call into question the legitimacy of diagnostic use predictive policing software. Surveillance carries with it expectations and power structures that

create a narrative before one has even occurred. Surveillance artworks like *The Nightwatch* often replicate the power structures that they critique. *My Blue Window* manages to subvert the existing power structure through embodiment.

The 2024 work *Future Relics*,[43] part of the Future Humans initiative at the Berggruen Institute, presents an online cabinet of curiosities (fig 28). A bot on the homepage states:

> Hello. I'm Diotima.
>
> Welcome to the Future Wunderkammer, a collection of Relics from near and distant futures. As the Archivist here, I'll be your guide to this growing collection.
>
> We behold a plurality of futures. Each Relic poses a speculative answer to the question, What will life become?

Figure 28. *Future Relics* homepage

Traditional wunderkammer have always imagined the relic as outside of time or place. *Future Relics* underlines this ethos in presenting a series of poetic objects dated decades in the future, situating the project in the world of speculative design. These

[43] Claire Isabel Webb, ed., *The Future Wunderkammer* (Berggruen Institute, 2024), accessed May 26, 2025, https://futurerelics.berggruen.org/.

opaque, futuristic objects represent various forms of AI, as objects in *Technological Dreams Series: No.1, Robots*,[44] (fig. 29) created by Dunne and Raby in 2007, coincided with the internet of things. In *Future Relics* and speculative design in general, fictional objects and attached scenarios allow for a playful engagement with ideas of how to represent the future. Critique of the present is often subtle in such works. In contrast, *My Blue Window* produces a kind of slow horror in the viewer as they occupy a seemingly real-time position of the police officer on patrol.

Dunne and Raby write, "We rarely develop scenarios that suggest how things should be because it becomes too didactic and even moralistic. For us futures are not a destination or something to be strived for but a medium to aid imaginative thought—to speculate with. Not just about the future but about today as well, and this is where they become critique, especially when they highlight limitations that can be removed and loosen, even just a bit, reality's grip on our imagination."[45] The speculative position can free artists and designers from the drudgery of politics, but may be ineffective depending on what is at stake.

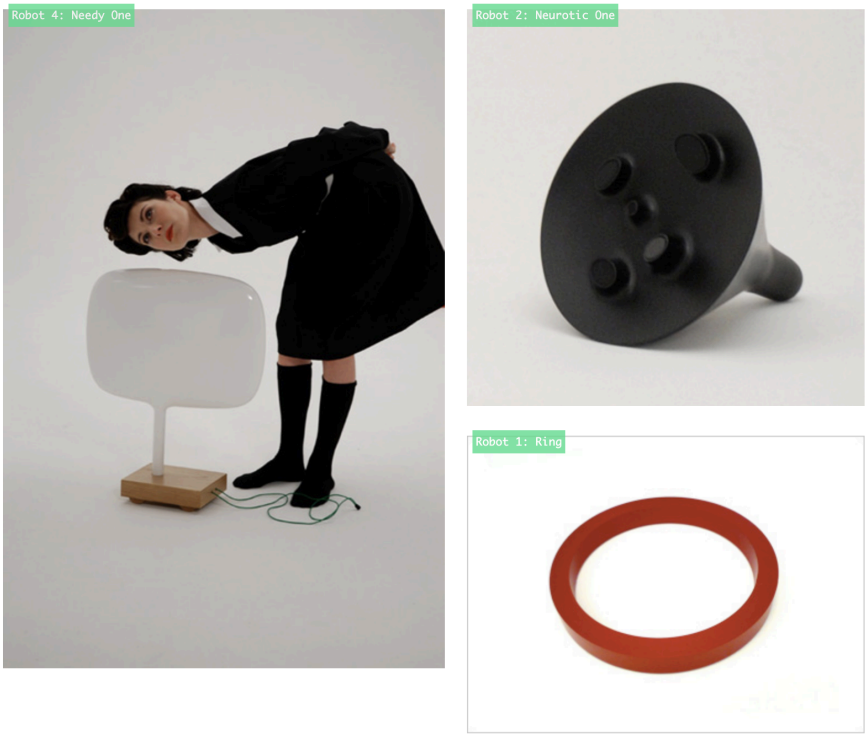

Figure 29. Images of Dunne and Raby's speculative robots. (Dunne and Raby 2007)

[44] Anthony Dunne and Fiona Raby, *Technological Dreams Series: No. 1, Robots*, 2007, accessed May 26, 2025, https://dunneandraby.co.uk/content/projects/10/0.
[45] Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: MIT Press, 2013), 3, accessed May 26, 2025, https://readings.design/PDF/speculative-everything.pdf.

Storage as a Speculative World

The sense of a barrier being generative is felt in Marlen Haushofer's *The Wall*, described by author Kate Zabreno in an interview with Elvia Wilk as "the 1970s Austrian novel that is about the end of the world, but also about caretaking and slowness and attention." Haushofer's novel is set in a remote area; the only speculative element is a translucent wall that cannot be breached, cutting off the main character from some unknown disaster on the other side. The book was influential to this project in both its valuation of slow observation and its depiction of a barrier that protects, as in museum storage, but also renders a space or system unknowable. *The Wall* describes a familiar, banal landscape that has been made special only by the framing of this barrier, similar to the way a live feed frames and makes special a shot of a nest, glacier, sky, or a semi-populated desert horizon.

Mal Ahern's essay, *Conservation After Conditioning,* describes walls built at MoMA to protect the collection as a "strangely obdurate block of non-change brushed up against the flux of the world." In a sense, Ahern is describing conservator's use of air conditioning to protect collections as speculative in nature. This idea of protection through stasis underlies the system of control employed in storage. Ahern questions whether this management has gone too far. *CollectionCam* points to a future where control breaks down, it asks a similar question to Ahern, "The outside world, in short, is coming. It will inevitably impinge on those protected spaces designed to keep it out. What would it mean, then, for museums and archives—if ever so slowly, consciously, and deliberately—to let the world in?"[46]

The tangible qualities of collection storage described by Ahern brush up against the conceptual nature of storage as impenetrable. In a conversation entitled "The Appeal of Tedious Folders," *The Museum is Not Enough*, Kieran Long describes the project *5 Eyes* by the artist James Bridle. *5 Eyes* was installed at the Victoria and Albert Museum, and displayed museum objects alongside their acquisition files–old folders containing internal papers detailing object notes and information (fig. 30). Long states,

[46] Mal Ahern, "Conservation After Conditioning, Part I: Keeping the World Out," *e-flux Architecture*, June 30, 2024, https://www.e-flux.com/architecture/after-comfort/616851/conservation-after-conditioning-part-i-keeping-the-world-out/.

"What the public most wants to see is the archive. What they're most attracted to is the thing that's most hidden."[47]

Figure 30. James Bridle, *Five Eyes: Hyperstacks*, installation view from *5 Eyes*, Victoria and Albert Museum, 2015. Image retrieved from https://jamesbridle.com/works/five-eyes-hyperstacks, accessed May 2, 2025.

Speculative Narratives in Collections

In a small publication accompanying Mark Dion's permanent installation *The Undisciplined Collector*, at the Rose Museum, he states, "The installation creates a character who is actually the embodiment of the institution itself." Displaying various tchotchke, vintage home goods, mid century furniture, and artwork within a small wood paneled interior, Dion's installation leans into the domestic aspect of the collector, and the limitlessness of their appetite (fig. 31). "The work plays with visual narrative conventions like the museum period room, the theatrical set, and the crime scene. These constructed spaces seem to me to be very empowering of the viewer, particularly in this case, since there is such a rich and varied ecology of things in

[47] Kieran Long and Mark Wigley, "The Appeal of Tedious Folders," in *The Museum Is Not Enough*, ed. Giovanna Borasi, Albert Ferré, Francesco Garutti, Jayne Kelley, and Mirko Zardini (Montréal: Canadian Centre for Architecture, 2019), 98-99.

the space.” The Rose in contrast, appears to be very disciplined in its exhibition spaces, and the door marked, “Collection Storage” off of Dion’s room appears to point to some kind of charming, no doubt crowded space just out of frame. CollectionCam similarly indicates that the view seen from the cam is perhaps not the most important view of storage. Very rarely, when collections staff is in the space, one can see their reflection flickering in the glass of the artworks, framed in light of the doorway upon entering and exiting. The design of collectioncam.net is a minimal echo of scientific monitoring sites hosted by the National Park Service and other government entities. It frames the feeds as documentary in nature, the superimposition semi-permanently intertwines two stories. This mirroring is unlike Dion’s full bore narrative, giving the project a kind of pseudo-objective authority.

Figure 31. Mark Dion’s installation at The Rose Art Museum, Brandeis University. Photograph by the author, taken March 2025.

Speculative Strategies

CollectionCam was presented for the first time this spring at a conference, *Collaborations Afield,* at Harvard University (fig. 32).[48] The conference brought together researchers interested in the natural world who were actively collaborating with people, nonhuman animals, or machines to explore specific sites. *CollectionCam* was presented as an extension of the artist's interest in animal telemetry and visualizing unseen networks of data collection. A panelist at the conference described the work as "para-surveillance," a term closely aligned with the concept of parafictional surveillance. Attendees at the conference viewed the project on their phones and for a second Boston was connected with collection storage at the Palm Springs Art Museum and the desert outside.

Figure 32. The author presented the work at the Collaboration's Afield conference in 2025. *Photo credit: Nicolo Manreal.*

A sub-theme emerged during the conference around the filmic method of superimposition (used in *CollectionCam*)—both as a metaphor for what is disappearing

[48] Collaborations Afield: Work across Ecologies and Disciplines, March 27–29, 2025, Mahindra Humanities Center, Harvard University, Cambridge, MA, https://collaborationsafield.com/.

or already a memory, and as a means of presenting multiple perspectives simultaneously. Multiplicity has long been a core tenet that humanities education shares with Net Art. *CollectionCam* incorporates chance through the juxtaposition of layered visual feeds; interpretation may shift from visit to visit.

Ideally, each new edition of *CollectionCam* would act like a new issue in a serial publication, adding richness to earlier issues. The next iteration would take place in another collection and alongside a different ecosystem (e.g., *CollectionCam_TUNDRA*, *CollectionCam_SWAMP*). These iterations would expand the sense of an institutional network while emphasizing precarity as a shared condition across ecological and cultural systems, with the Palm Springs Art Museum serving as an initial case study.

CollectionCam builds on earlier works focused on understanding and narrativizing surveillance data and imagery. These works are concerned with networked systems but also the edges and limits of those networks. Three online projects detail a conceptual and methodological approach prior to *CollectionCam*: a project utilizing tracking data from surveilled mountain lions [lionslivehere.com], a series of videos based on a surveillance report [thekompromat.com], and a project narrativizing live surveillance footage collected during the pandemic [coronafriends.com].

Coronafriends: Lost Time

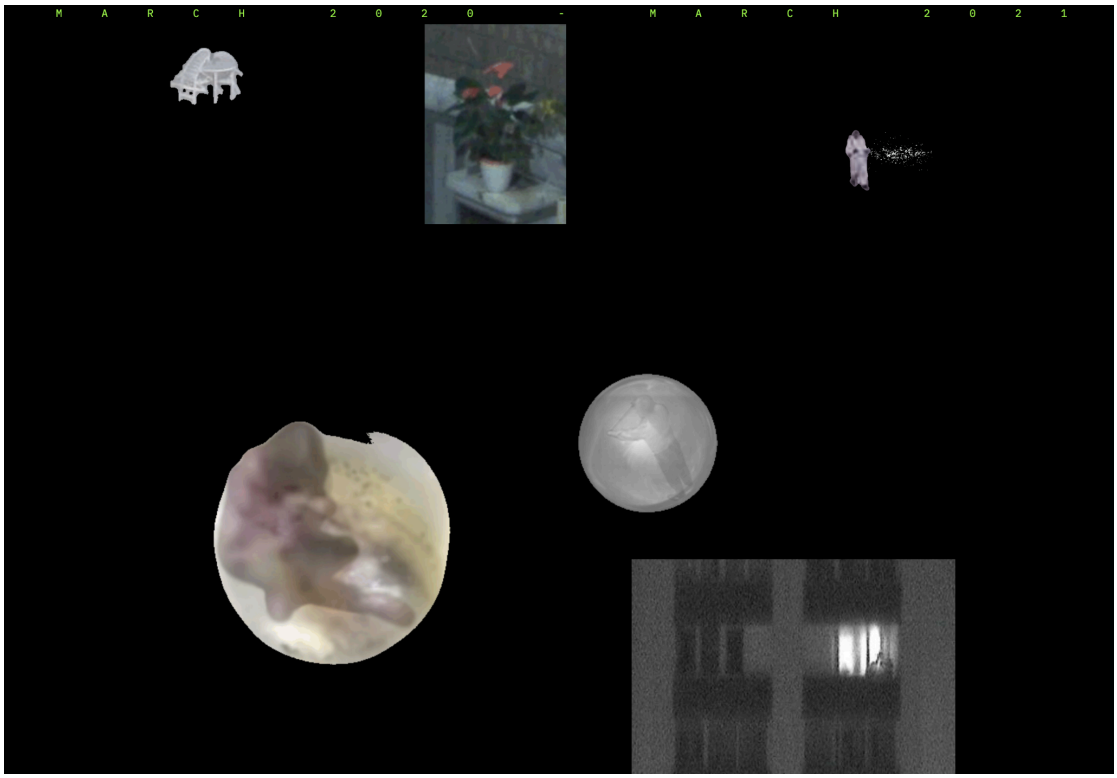

Figure 33. [coronafriends.com](), homepage featuring gifs of repetitive actions.

Figure 34. Pandemic-era surveillance footage from cities around the world.

Coronafriends.com is a site compiling footage from major cities around the world, collected weekly from unsecured cameras in public places from March 2020 to March 2021. The homepage of the site displays gifs of repetitive actions: a girl touching her hair, an endlessly replaced flower arrangement, a group of lawn chairs being rearranged, a security guard doing pushups against a door (fig 33). Upon click-through a series of compilation videos plays from cities such as New York, Tehran, Madrid and São Paulo (fig 34). Audio of people describing their first impressions of the pandemic, collected in summer of 2020, plays as the videos progress from empty streets to police gathering in groups. This project is a collection of short videos but also represents the action of the author watching this footage live, alone in their apartment. That part isn't shown but felt in the lonely voices of various friends, colleagues and family as they navigate a time of uncertainty.

The footage is documentary; the gifs and audio emphasize a narrative of loss. The live feeds from which the videos were collected were similar to those in *CollectionCam,* in that a single visit might not show the whole picture of what is occurring in that place. *Coronafriends* collects visual data and re-presents it to the audience; *CollectionCam* hosts specific views, but does not reinterpret the data into a narrative. The audience 'collects' impressions of the site from viewing, receiving a fuller understanding only if they choose to visit multiple times.

The Kompromat

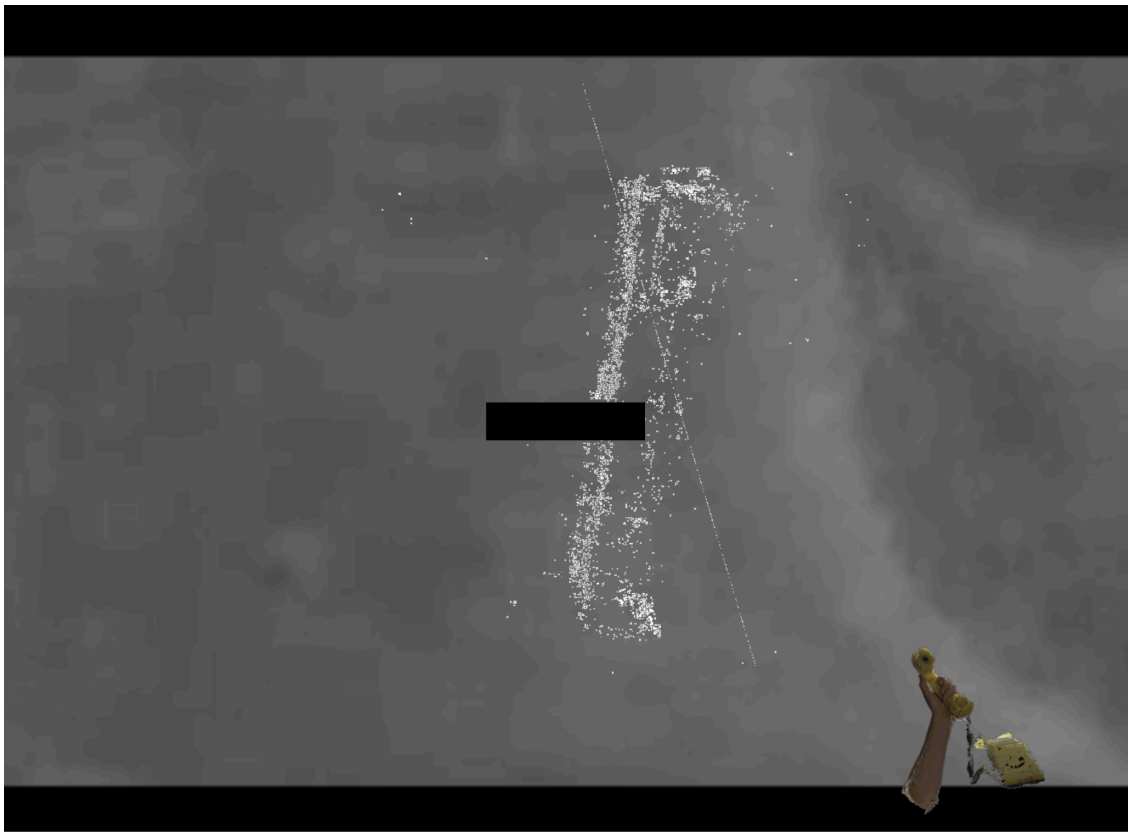

Figure 35. Homepage of thekompromat.com displaying a center bar with navigation to the video series, surveillance footage of actual kompromat plays in the background.

The Kompromat is a web series exploring truth and fiction in politics, viewable at thekompromat.com (fig. 35). It takes as its source material a much-discussed pdf dossier purported to be collected by an intelligence agency first hired by Republicans and then by Democrats. The dossier was widely published by news outlets despite a lack of evidence as to its veracity. The video series explores minor figures named by letter only (Source A, B, C etc) in the dossier, and how they might be faring after publication of their exploits (fig. 36, 37). Described as spies by the media, these people may have essentially been bureaucrats under duress, or even not existed at all. At the core of the dossier were salacious details of the activities of a presidential candidate, now President, and allusion to related surveillance video.

Along with the dossier, *The Kompromat* uses quotes from news articles to create dialogue between the characters. Narration consists of a voiceover in Russian with English subtitles. The narrative is structured by the exchange of messages through

various aging analog media (VHS, microcassette, telephone, mailed documents, video projector, etc) between these support staff. The purpose of these elements is to point to the rickety cycle of information unreliably passed between government workers, the media, and the public.

Figure 36. Still from video *Source D* as shown at thekompromat.com.

Figure 37. Still from video *Source F*.

Lions Live Here

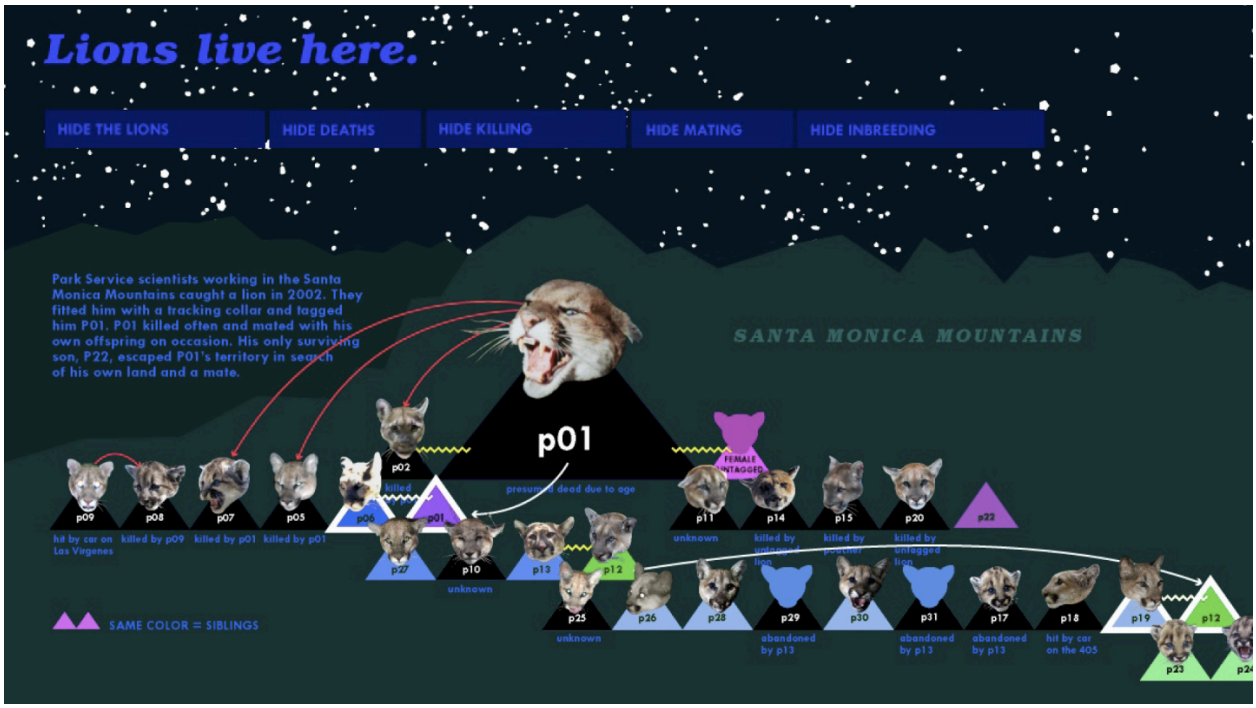

Figure 38. Lions Live Here homepage

lionslivehere.com presents a schematic of the relationships between mountain lions living in the Santa Monica Mountains in California (fig. 38). These lions are tracked by scientists at the National Park Service, via collar. In *Escaping the Digital Unease,* Felix Stalder writes about the human response to animal telemetry:

> "For the sum of 2,500 dollars, one can name a shark and follow it online, quasi in real-time. In a sense this turns a wild animal — perhaps even a shark – into something similar to a household pet (i.e. one whose name and personality are familiar), although there is no question of it being tamed. What we can surmise, here, is a shift in the relationship between culture and nature: away from the clear distinction between the two to a complex interrelation and co-constitution."[49]

Scientific monitoring usually tries to avoid anthropomorphising animals, but dramatization of the animals' plight can be useful to attract public interest and subsequent funding. This loop from tracking to funding is well-worn—even when the public is not involved directly, the data collected is often used to apportion funds.

[49] Felix Stalder, "We Are All Bruno! From Unease to Technology to Empathy with Nature," in *Escaping the Digital Unease*, ed. Raffael Dörig and Domenico Quaranta (Langenthal: Kunsthaus Langenthal, 2017), 67.

Culture and nature have always had a 'complex interrelation'. In the case of *CollectionCam*, the relationship is presented as ongoing and parallel. Completed in 2015, lionslivehere.com was reported to show a 'tragic family tree;' a local news reporter stated, "don't let the neon colors fool you."[50] In contrast, the colors of *CollectionCam* are muted to foreground the feed. *Lions Live Here* was meant to be shared, usually an intrinsic quality of url-based work. *CollectionCam* has some commonality with early Net Art in its relative lack of shareability, simple html and minimal interaction through toggle. Net Art was designed to be ephemeral; *CollectionCam*'s goal is to last as long as possible.

These projects reach toward the goal of using live feeds as a medium, specifically those that collect visual information in remote locations. The first webcam was testament to the desire for telepresence, even when the subject is a lowly coffee pot. Live feeds have since become commonplace through backyard, doorbell, baby cams or any other realm of our lives we'd like to surveill. Remote live feeds not only put us in another place, but an inhospitable place we cannot go or cannot stay: ocean depths where we would be crushed, bird nests hundreds of feet in the air, data centers we are not allowed to visit or archives where we cannot remain.

Conclusion

CollectionCam reflects the institutional need for control, the possibility of impending change, the precarity of the ecosystem inside and outside the museum, in reality and metaphorically. The difference between the institutional view and the project view is in contextualizing storage as public, within a specific place and time, and for an undefined duration. A window to the outside and unlimited visitation are anathema to collections practice. If the actual frame of the camera is by necessity chosen by the institution, the length of the broadcast has been slowly eked out by the artist.

Future Iterations

The project began with an interest in animal telemetry via the 'animal internet' and LANDSAT, and the aesthetics of the sensors involved. This led to the idea that scientific monitoring could be applied to cultural data, in this case, museum collections.

[50] Eric Zassenhaus, "Website Outlines Santa Monica Mountain Lions' Tragic Family Tree," *LAist*, March 9, 2015, https://laist.com/news/kpcc-archive/mystery-website-outlines-santa-monica-mountain-lio.

The aesthetics of animal and land sensors and the reach of this network is still of interest, a typology of animals and sensor types is gathered at hyperlands.org. Sensors are adapted to each animal and display a utilitarian design (fig. 39).

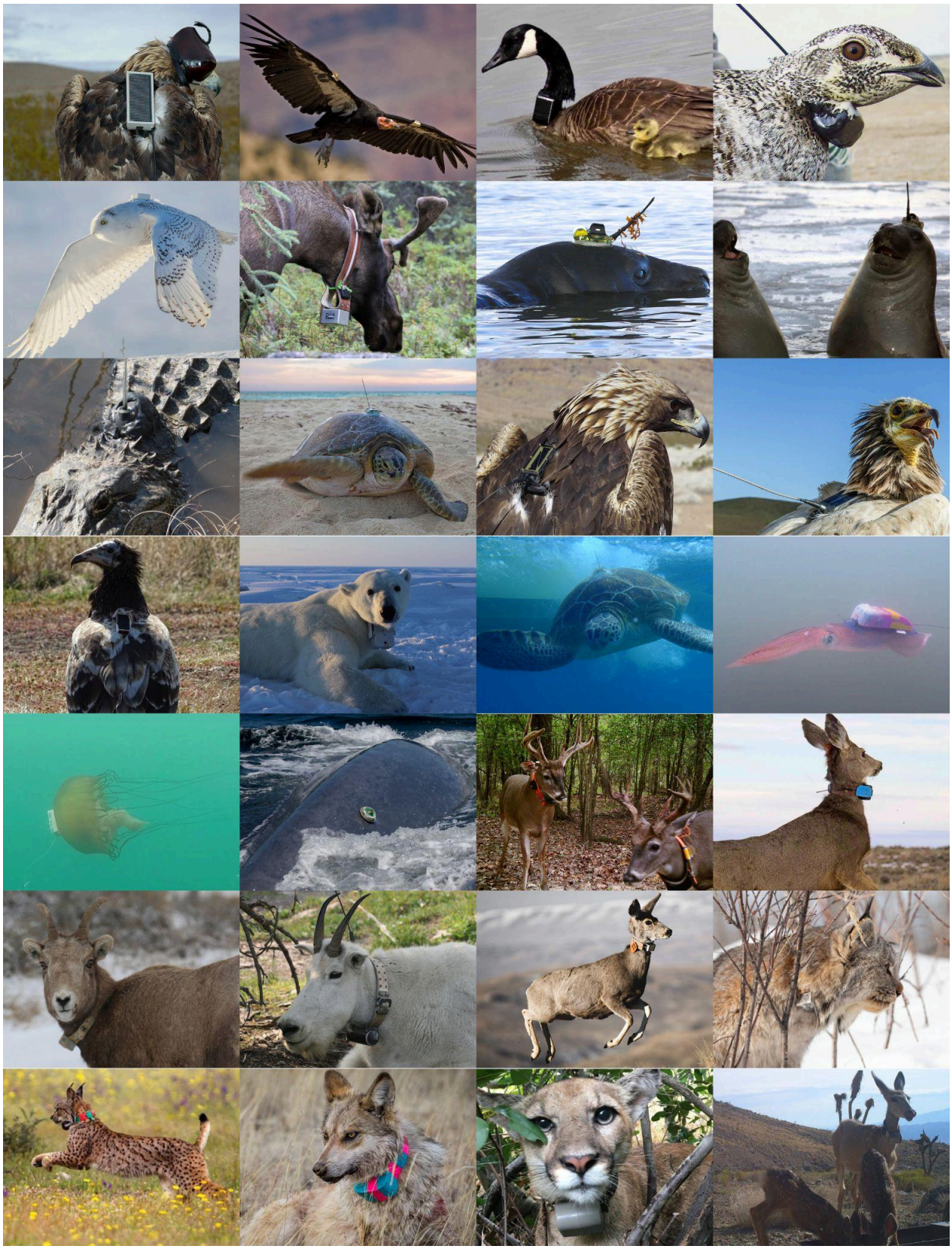

FIG 39. Animals equipped with tracking sensors.

Scientists document installation of sensors on animals; they also document sensors on land. These images are shot as landscape photography in the lineage of landscape painting like Caspar David Friedrich's famous *Wanderer above the Sea of Fog* (fig 40), showing man against the elements. When people are not included, the sensor takes their place in the frame, sometimes shown as though perched watching the view of a sunset or a serene lake (fig. 41).

Figure 40. *Wanderer above the Sea of Fog* (1918).

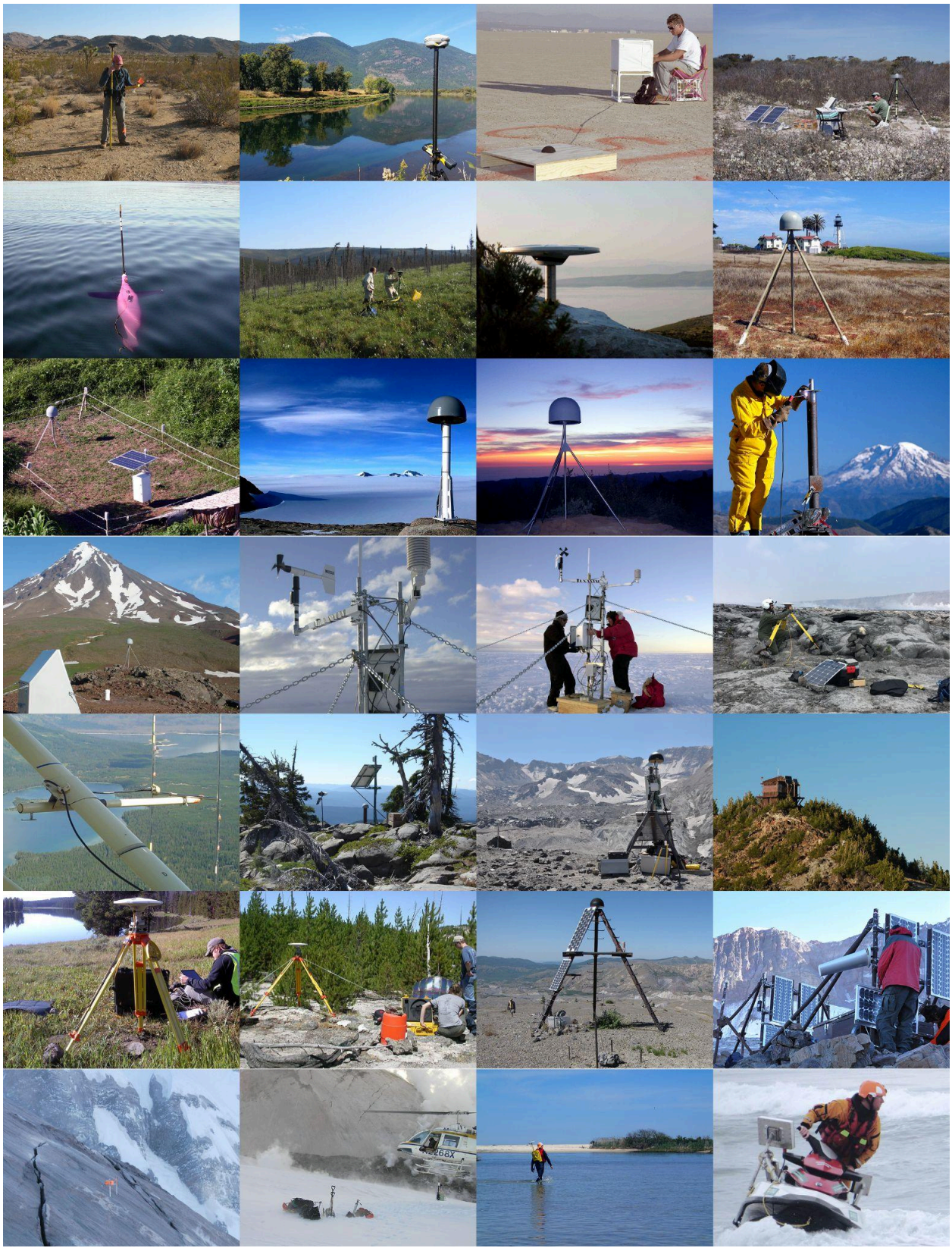

Figure 41. Scientific documentation of land sensor installs.

CollectionCam's land sensor, in this case an Eufy camera, is similarly personified in project documentation; a fence breaking any sense of the sublime (fig. 42). When both feeds are displayed, the small rectangle of light in the unoccupied collection view takes the place of the lone figure of Friedrich, either hopeful or moody, depending on the weather (fig. 43, fig. 44). The framing borrows from traditional landscape painting and photography.

Figure 42. CollectionCam's land sensor.

Future versions of the project would replicate this traditional framing to emphasize the sense of the collection as a landscape and an ecosystem.

FIG 43. CollectionCam at dusk, with loading symbol.

FIG 44. CollectionCam during inclement weather (storage is unoccupied).

CollectionCam_DESERT is the initial iteration of a series of live feeds that contrast closed collections and their ecosystems with the surrounding open ecosystem. Future iterations might include installations of live feeds in additional harsh, remote, or endangered ecosystems and paired cultural collections, such as data centers on the tundra, or the array of cables carrying information in the deep sea off the coast of Oregon:

> *While at the University of Washington I was able to take a voyage to the deep sea with the Oceanography Department, to visit Axial Seamount, a deep sea volcano about 300 miles off the coast of Oregon. Sensors rest on the volcano and send 'near real-time data' back to shore, watching for signs of an eruption.*
> *I assisted in monitoring images taken by the remote cameras aboard Jason, a deep sea ROV (remote-operated vehicle). I felt closest to the life of a remote camera on this trip, to a machine life, because of a four hours on, four hours off 24/7 schedule of sleeping and waking. I saw a photo in a scientific journal before we left on the ship, of anemone and mollusk colonizing an undersea cable. When we pulled up a camera that needed to be replaced, the cables still had anemone attached (fig. 45). Humans traced the geology of the volcano with the cables, the undersea life traced the us back, using the same infrastructure.*
> *This is something I'm still thinking about.*

Figure 45. Anemone on camera cables pulled up from the deep sea.

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Appendix A

1. *Screen recording*, documentation of collectioncam.net, **when landscape and storage are both occupied**, viewable at: https://vimeo.com/1091661171/c1bbd51167?

2. *Screen recording*, documentation of collectioncam.net **toggle**: https://vimeo.com/1091661675/b3e884a7ed?