SLAB SAND CLOUD GRID

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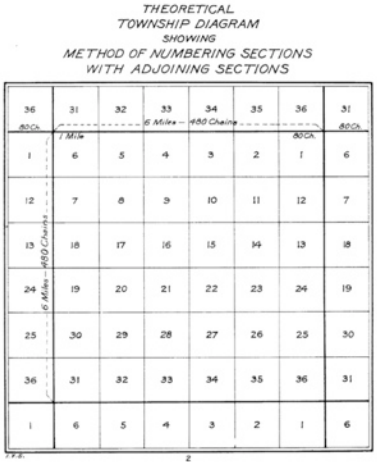
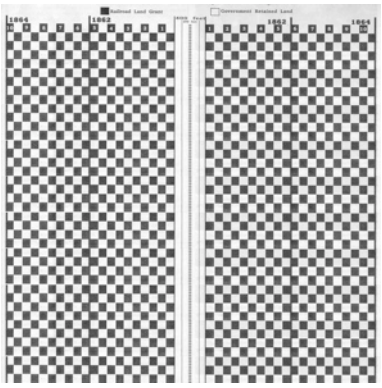
GRID





The grid was the United States government's first geometric intervention. There was at some point, quite simply, too much space. The Louisiana Purchase, the Oregon Treaty, the Mexican Cession—each time the US bought more land, it directed its team of surveyors to overlay the unknown terrain with an invisible pattern of orthogonal lines. The resultant mesh mirrors the configuration space of the Cartesian plane—within it, the body becomes a free particle, unconstrained in two-dimensional movement across a surface. Though this has a liberating appeal to it at first, experiencing such a system while standing in the midst of a featureless playa or while traversing shifting sand dunes is nothing short of alienating. The grid is designed to extend outwards from precise reference points, but these points are made in reference to locally irrelevant features. The knowledge of an imperceptible, pervasive grid, arbitrated by distant bureaucrats, can become an endless source of discomfort for the already psychologically vulnerable desert dweller. The grid is cheap, fast, primitive, an easy way out of confronting the scene on the ground. But without constraint, without context, the body is quickly lost in the grid.

When the lines were first drawn, there were no settlements in sight. However, Manifest Destiny was a powerful force, and in anticipation of an insatiable wave of settlers, the government reserved certain sections in the grid for special use. In particular, the final square mile of each township,

section number 36, was set aside for the education of the people. The thousands of sections 36 throughout the state of California interpreted this mandate differently, variously building schools on the plot, leasing it out to fund teachers' retirement plans, or simply letting it lie fallow. With the government as their custodian, these plots enjoy the protection of being Public and the various shades of relief from the pressures of capital that such a status brings.

When electricity arrived in Los Angeles in 1917, Section 36 of Township 10 South, Range 14 East was a vacant zone in the desert, hundreds of miles beyond the sprawl of the city on the coast. As the demand for electrical power in Southern California grew, so did a network of generation stations, high voltage transmission lines, and distribution infrastructure, but this grid never reached Section 36 of Township 10S 14E. Today, monumental transmission towers drape thin wires across Section 36's hazy horizon, but the electrons in these veins are destined for far away places with names and shapes that are not confined to the logic of the square. In this is an irony of modern grid life: just as you believe yourself to be leaving one behind, you enter deeper into the mesh of another.

SAND

The *Soil Survey of the Brawley Area, California* (1923) describes Superstition gravelly sand in rather unremarkable terms:

> The surface soil of the Superstition gravelly sand consists of 6 to 12 inches of light brownish gray or light grayish brown sand ranging in texture from rather coarse to fine, and containing a quantity of waterworn gravel from one-fourth inch to 2 inches in diameter. The gravel consists mainly of quartz, granite, and sandstone and is confined largely to the surface few inches. The subsoil consists of alternating layers of light-brown and grayish-brown sand. The subsurface material is usually of medium texture, but locally contains thin strata of fine, sharp sand. Below 36 inches the material typically is a light-brown, moderately coarse quartz sand. In places thin strata of gravelly material occur at intervals throughout the soil profile. Except where

> winds have had a modifying effect upon surface configuration, the surface is fairly firm.

Such a rational characterization of the surface material is no more relevant to a body wandering in the desert's plane than the idealism of the survey grid. Attempt to maneuver off a graded right-of-way into the oceans of sand and the difference between 6 and 12 inches loses its numerical significance to become the difference between a lovely mid-morning cruise and an afternoon of digging free two tons of immobilized steel transportation.

Laying in a sliver of midday sun beneath the frame of the vehicle that got you this far, shuffling sand away from your axles bare handed with your whole body pressed into that quartz-granite-sandstone-palo-verde-spine milieu, it suddenly becomes clear: the sand is not an inert object to be quantified, but a material actant with its own inhuman desires. It predates you, it will outlive you, it can take its time, so you best start negotiating.

Sand, as a general classification of soil, is only one material indicator of the substances that collaborate and compete to enact the ecosystem we call "desert." The effects of each component—sand, sunlight, water, wind, organic matter, human activity, tectonic plates and subterranean geology—feed back on each other at various time scales such that a pattern of desertification over the last few thousands of years has created the environment found in Section 36 today. To be human in the sand-system is to forfeit the pretense of total control, to become as the soil. In this process, you do not sacrifice your own humanity, but rather gain awareness of the significance of substance.

If Section 36 is ever to become Utopia (and why shouldn't it be?), then one must not neglect the material reality of the sand.

SLAB

When the military came to Section 36 in 1942, it swiftly initiated a program of desert alchemy. Sand and scrubby plant life made fine bombing targets, but they provided no suitable terrain for the mess halls, lavatories, offices, and munitions stores that would become Camp Dunlap. Laborers commenced extraction of the Superstition Sands from the fields to the east, trucks pumped water into their tanks from the branch of the All-American Canal on the eastern border of the camp and shipments of Portland cement arrived by a Southern Pacific Railroad line a mile to the west. Water, cement, and aggregate swirled about in diesel-powered mixers to then be tipped into wooden forms laid at 45° to the geographic north of the grid. Nineteen concrete slabs and one swimming pool emerged; Marines moved in; artillery, bombs, and missiles were launched. With the fight against fascism abroad as an endless source of uncertainty, the Marines at Camp Dunlap found stability in the solid ground they had built out of flowing water and shifting sands.

Victory overseas brought an end to the necessity of a slab-base on Section 36. Bulldozers rolled in, razed the buildings, and moved on. The motivation for this cleanup was seemingly more out of fear of squatters than any sense of ecological stewardship, as the buildings' foundations were left behind without regard for their vestigial incongruence in the landscape. The military removed what it

thought were the minimal conditions for existence in this environment—the hastily built shelters—assuming that the platforms which remained would be inert in their flatness and lack of specificity.

But without the stress and grime of wartime military base life, a nation reinventing itself in the postwar years found the openness and possibilities of the platforms (not to mention the attractive desert climate) appealing. From the time the base closed, several servicemen stayed on, camping in tents on the stable ground that the slabs provided. The concrete forms and surrounding land have remained occupied ever since. First dune buggy-based adventure-seekers, then later aging snowbirds from the North in massive RVs, gutter punk runaway teens, fed up salarymen looking for a new life, perpetual hippies, migrant agricultural workers and just about every other demographic imaginable has made their home on the slabs for some time. As the settlement flourished, all toponyms from the past faded away and Slab City was born.

That a space differentiated from the rest of the vast desert only by its rectilinear concrete slabs draws such a crowd demonstrates that the standards for catalyzing human habitation are lower than one might think. Just the slightest demarcation that humans *had* survived on this specific spot was enough to signify that it was perhaps not as inhospitable as the environment might indicate.

CLOUD

A billboard on Highway 86 just north of El Centro promises to "[bring] the Cloud to the Imperial Valley." Zumasys, based a few hundred miles away in Irvine, hopes to situate the quantitative lives of cattle, citrus groves, and olive trees alongside the stored data of female apparel brand bebe, mining conglomerate Rio Tinto Group, and restaurant chain Panda Express. Farm management and fashion present very different faces to their customers on the front end, but the character of their operations converge as digital bits on the back end. The shared language of data allows their records to exist in such proximity without conflict. In the Cloud, their datagrams will commingle, but never touch, on redundant networked storage devices, virtually served to their respective endpoints on demand.

Zumasys is in the “cloud computing” industry, a term referring to the distribution of computation, networking and data storage as services to be subscribed to, rather than as objects to be owned. The computing industry of the previous half century was dominated by a business practice that promised the freedoms of the virtual delivered, somewhat paradoxically, as massive installation of physical hardware. Clunky boxes of raw computing power took on sleeker designs as time went on, attempting to hide the mess of cables and circuitry behind an industrially designed façade. But when server racks looked like sports cars housed in glass-walled data center-showrooms, the only remaining design choice was to polish these boxes so much that they evaporated into the air and became as invisible as the functions they provided. Computing in this decade is no longer object-based, no longer something that needs to be housed and air conditioned at greater cost than human employees. Computing is a substance that exists somewhere “out there,” purchased as one would a utility, its physicality abstracted to finally become a purely virtual experience. The immaterial nature of the Cloud means it can thrive in previously inhospitable environments. Just as the nourishment of irrigation from an unseen river enabled agriculture to boom in the Imperial Valley, so too might the Cloud bring the latest in computational excellence to such a remote region.

The Cloud, in a general sense, is not anything new. Before consumers owned media-objects such as VHS tapes and DVDs, films were experienced in the home via the invisible transmissions of television. Before that, radio provided non-stop musical entertainment; disruptions in the ether were translated into physical sensation through a device that received and processed information, but held no content in itself.

In this light, we identify as much with the services we use as with the content they provide. To declare “I don’t watch TV” or “I don’t use social networking” is to express something essential about oneself in terms of format over style. If this is true for media it is also true for cities and space.

Members of a given community are bound together as users of shared infrastructures: roads, communications channels, computer networks. The overall types of services (cars or subways? dialup or broadband?) and their connectivity—the topology of a space—dominate the sense of what it is to be "in" a certain place.

The Cloud often obfuscates the actions of the true owners of infrastructure and content. Restrictive software licenses, mandatory advertising agreements, and the resale of once-private private usage data become issues when one is a user and not owner of a given piece of infrastructure. Though the Cloud tries to render itself as invisible as possible, these circumstance should only draw more attention to the power dynamics inherent in such systems. Recent years have seen large corporations (today the favorites are: Google, Facebook, Amazon and Apple) take the leading role as service providers offering to host data that may have previously existed on a personal hard drive or spread across a more diverse set of businesses. But in spite of this dominant trend towards centralization, alternative arrangements exist— variants on the Cloud are possible that do not host everything within a few corporate entities.

For example, in Slab City:

A modest antenna connected to a centrally located Airstream trailer emits a signal at 96.3 MHz between the hours of 9:00 am and 9:00 pm daily. The radio station obeys the rules of the sand (it depends on the sun for its power and is permitted to propagate only across the relatively flat surrounding terrain) and ignores the law of the grid (its broadcast is authorized by no jurisdiction that might be so bold as to include the transmitter within its sovereign loop). It energizes the neighboring spaces with sunlight transmuted into low-frequency oscillations via a system of off-the-shelf photovoltaic panels and grey market transistor circuitry. Radio Mike is the human host, but his

voice is silent on the air, and though he provides the programming, he asks for nothing in return, not even a minute of attention (that most precious of substances) paid to advertisements. The broadcast defines a zone with a fuzzy edge: inside, you can hear the music; outside, there is only static; in between, a fading indicator of your proximity to the electromagnetic heart of the community. In this way, the radio is a binding force of data-vapor that draws the inhabitants of today's Section 36 together as users of Slab City Free Radio.

The hippies of yesteryear sought enlightenment in alternative living by moving off the grid. Will the radicals of tomorrow be those who drop out of the Cloud?

(Or, to put it another way, as the owner of the Slab City Internet Cafe once told me, "I love the WWW, but I don't much care for the ISPs.")

OBJECTS/INTERVENTIONS

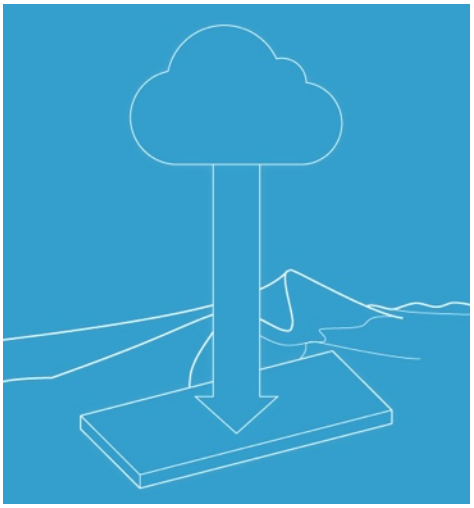
The outcome of sixth months of investigation into the infrastructural history and present-day manifestation of Slab City with collaborator Hermione Spriggs include several objects, media artifacts, and interventions in response to this unique space. Each project encodes within it one or more of the interrelationships between slab, sand, cloud, and grid. They are as follows:

Desert Alchemy is a three-channel video piece that documents a re-performance of the process of extracting sand from the desert fields and water from the Coachella canal and their subsequent transformation into a modest concrete slab. The first channel shows the process of collecting the raw materials on site. The second channel focuses on the mixing of water, cement, and aggregate and pouring the resulting concrete into a wooden formwork. The third channel consists mostly of static shots of the existing slabs in Slab City in their various states of decay, alluding to the fact that that their current existence as stable ground will eventually give way as they dissolve back into the sand they are made of.

Metric Audio Map consists of an audio recording of Slab City Free Radio, an informal FM broadcast on 96.3 MHz, and a surveyor's measuring wheel modified to play back the recording at a speed proportional to the speed of the wheel.

As the broadcast of the radio station roughly covers the inhabited area of Slab City, it serves as one of the few reasonable definitions of a boundary for the space. With no official line for the city's edge, our experience of "arriving" coincided with the point at which the radio broadcast was first discernible out of the static and we became users of this piece of the cloud. To document this spatial-acoustic experience, we walked from the open desert on the eastern edge of Slab City, in through the center of town, and out via Beal Road towards nearby Niland, recording the radio broadcast as we went. The repurposed measuring tool that houses the recording suggests that the size of Slab City is best measured in terms more referential to its unique infrastructure rather than standardized units of feet and inches.

Personal Cloud Map was generated out of an exercise to experience the grid by seeing it as the mapping machine sees. After much time spent looking at the geography of Slab City through the lens of overhead satellite imagery via Google Maps, I desired to produce my own map in a similar but more accessible manner. In lieu of a constellation of high precision orbiting satellites, I used a digital camera suspended from a six-foot helium-filled weather balloon. The balloon-suspended camera captured a swath of land narrow enough that imaging an area the size of Slab City required that I walk a zig-zag route following the gridded street pattern. Of the thousands of images captured, around one hundred were chosen and stitched together to form a seamless view of the city from above. The resultant resolution is many times greater than that available from Google and the terms of use for the imagery are far more liberal.



Desert Drop attempts to create a new piece of alternative Cloud-like infrastructure in Slab City by providing an off-grid, offline, local peer-to-peer file sharing service. Housed atop of the slab made in *Desert Alchemy* is an assemblage of a low-power WIFI router, an eight gigabyte USB flash memory drive, a solar power system, and a basic wooden shade structure. When a visitor connects to the network with SSID "desert-drop," custom software redirects any attempt to connect to a web site to the Desert Drop home page. This page lists files that have been uploaded to the server and stored on the flash drive. All of the files can be freely downloaded by any visitor, and any visitor may upload any file of their choice. There is no facility for deleting files so an ongoing archive of the storage node's use is maintained. The structure provides a minimal space conducive to the act of computing in the desert.

Desert Drop is inspired by related open-source art projects Dead Drops, where USB drives are installed to protrude from walls of buildings in cities around the world, and Pirate Box, a wireless version of Dead Drops. These projects suggest the set of tools that might enable out-of-the-cloud living, and Desert Drop is an effort to illustrate a specific use case for such technology.