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Fall 2008

MIL_CIV Immersive Surface

Elizabeth M. Quick

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Architecture Thesis, 2009-Elizabeth Quick: MIL_CIV immersive surface

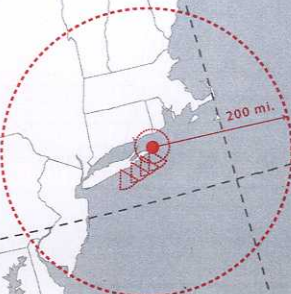Elizabeth Quick

"The great empire that created a map that was so detailed it
was as large as the empire itself. The actual map itself grew
and decayed as the empire itself conquered or lost territory."

-Jorge Luis Borges

200 mi.

MIL_CIV immersive surface

Elizabeth Quick

Primary Advisor: Mark Linder
Secondary Advisor: Michael Pelkin

0   500 Kilometers

0   500 Miles

ABSTRACT

1:1 map: monitor measure track train

[EX]trinsic trajectories:

6 — GPS / radar technologies

8 — MilSim gaming

9 — Airsoft as CQB training

10 — civilian defense meets civilian recreation

tracking military and recreational activity on Montauk

[IN]trinsic trajectories:

transitions from military to recreational activity — 14

Taxonomy of tracking training artifacts within the site — 15

Tracking seasonal population influx — 20

Profiling Montauk: arts/espionage/fishing/luxury getaway — 17

tracking Montauk's climate — 12

mil-civ immersion

projected trajectories:

22 — program modulator

24 — itineraries

30 — networks/adaptations/insertions/surface

37 — SOURCES

ABSTRACT

"The great empire that created a map that was so detailed it was as large as the empire itself. The actual map itself grew and decayed as the empire itself conquered or lost territory."

-Jorge Luis Borges

The pervasive proliferation of complex tracking systems such as GPS and simulation gaming environments such as Full Spectrum Warrior are transforming the built environment into an immersive 1:1 map where all flows and transactions are measured, monitored, and tracked. The gap between map and real experience disappears resulting in an immersive map. The spatial implications of this real time 1:1 immersive map creates an **opportunity for architecture itself to monitor, track, and measure flows and transactions.** This tracking and simulation agenda plays out specifically in the **design of a surface that integrates military training, military artifacts, and civilian recreation into the MIL_CIV surface** that modulates due to games, time of day, season, and participants acitng on the site.

Sat. @ the beach

search and rescue

Extrinsic site:

The broader context of simulation and tracking techniques emerge from the U.S. military-industrial complex as a partnership between military agendas of defense and postwar civilian agendas of recreation

Intrinsic site:

Former Montauk Military Base has transitioned from a program of military defense to a recreational program authorized by the national park service in 2002. Currently, there is an unsual relationship between this historical defense program and recreational activities such as picnicking and hiking.

Itineraries:

5 itineraries ranging from U.S. army soldiers to single family vacationers are designed to integrate and juxtapose different tracking and simulation games at play into a single immersive experience where the line between target practice and lounging on the beach becomes difficult to discern.

Networks / Adaptations / Insertions / Surfacing

visual sitelines that network existing military artifacts within and around the former Montauk military base
immersive wall that networks simultaneous discrete events occurring site
Adapt existing military artifacts to participate in this immersive mil-civ game
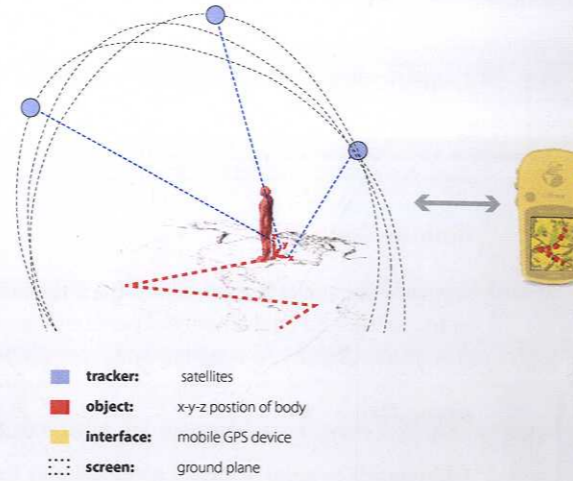Insert new volumes that
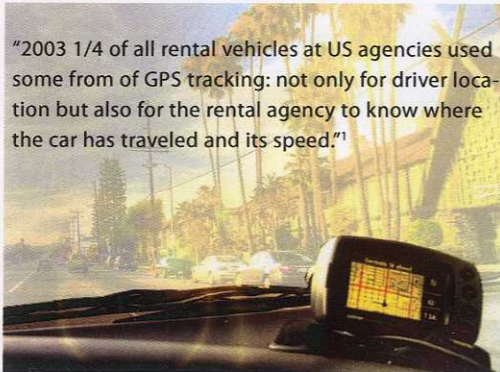Design surfaces that map different tracking and simulation territories

GPS: mobile mapping

GPS can simultaneously map an object in space while the object is in motion. Therefore the technology allows the potential for individuals **occupy a real time map**. where the gap between representation, (the map), and inhabited environment disappers.   GPS technology was pioneered by United States Navy in the 1960s to track military weapons and improve missle guidance. In 1983 GPS technology was officially demilitarized and availible for civilian use. Popular applications today are recreational such aiding in hiking and driving

	tracker:	satellites
	object:	x-y-z postion of body
	interface:	mobile GPS device
	screen:	ground plane

how it works: satellites orbit earth and transmit x-y-z postion to ground control stations which transmit data to individual receivers
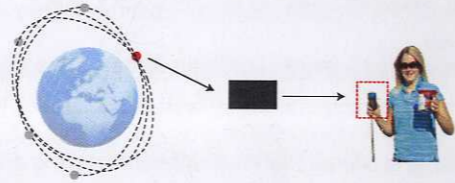
Immersive map

"2003 1/4 of all rental vehicles at US agencies used some from of GPS tracking: not only for driver location but also for the rental agency to know where the car has traveled and its speed."[1]

Dennis, Kingsley. *Global Gridlock: How the US Military Industrial Complex Seeks to Contain and Control the Earth and its Ecosystem.* April 2 2008 Centre for Global Research www.globalresearch.org
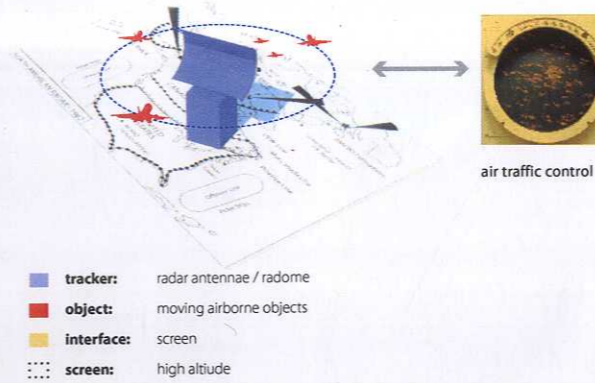
Recreational GPS

Geo-caching
type of treasure hunt where participants search for hidden caches using hand held GPS devices.
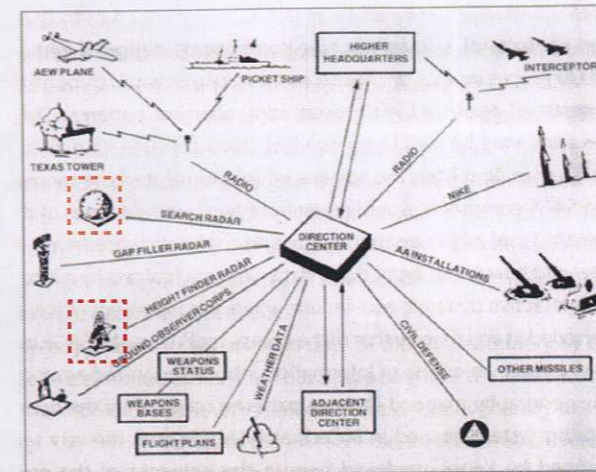
Virtual-caching
Virtual caching provides GPS coordinates to existing points of interest where the participants answer a question or a riddle about the existing landmark or monument, or take a picture to let the cache "owner" know the participant was there.

eyes which cannot see: RADAR

Radio detection and ranging transformed the war machine into a space opera; a war that was fought remotely underground in situation rooms . Invisible communication networks replaced physical network of observation towers. The screen detached military personel from actual events that took place and became the primary means of interface between war opponents. This spatial paradigm of screen as interface between subject and object MIL_CIV immersive surface investigates the opportunites in the interface as a means of networking remote activites

air traffic control

	tracker:	radar antennae / radome
	object:	moving airborne objects
	interface:	screen
	screen:	high altiude

how it works: radar transmitter emits radio waves that are reflected by target and detected by a receiver allowing transmitter to detect long range objects that cant be seen or heard

"Thus SAGE exemplified in both its architecture and in the logistics of its design and production the **dispersed, computerized spatiality of the organizational complex** as it passed through the research laboratories of universities and corporations."

–p190 The Organizational Complex:Topologies of Knowledge by Reinhold Martin

Martin, Reinhold. *The Organizational Complex: Architecture, Media, and Corporate Space.* The MIT Press 2005

MILSIM Training: 'Grand Theft' military simulation

The Military and private gaming companies and institutions team up to develop innovative training technologies that simulate war scenarios. Eventually these technolgoies trickle down into the consumer market. The Institute for Creative Technolgies is a perfect example of an academic military partnership that spawns consumer products tied to miltary logics.
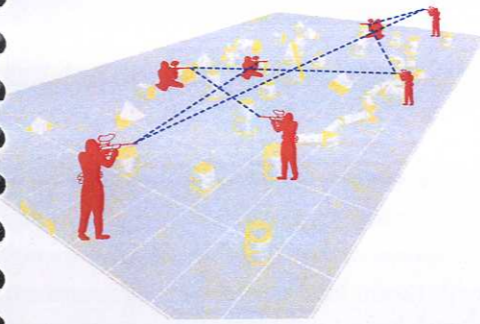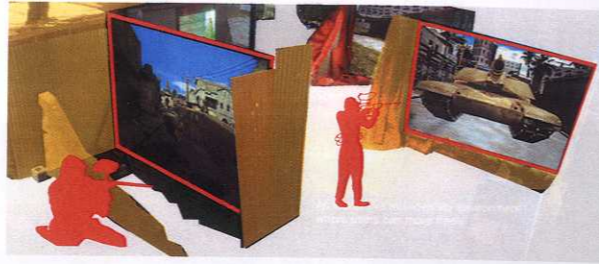
■ object:	x-y-z postion of body	
■ interface:	bunkers + gun	
⬚ screen:	ground plane	

Tactical Airsoft Center address:T.B.A. phone number:T.B.A. http://www.airsoftcenter.net   Tu,E 10:00-18:00 Sa,Su 8:00-18:00

games: Sentry Stalking, Man Tracking, Combat Techniques, CQB, Sniping, Domestic Threat Response, and Tactical Recovery of Aircraft and Personnel

size: 5 indoor fields 7 outfields

user: law enforcement military civilian

Airsoft CQB field 10902 Carolina Dr. Manassa, Va. 20110 Field : (703) 335-6800 http://www.airsoftcqb.com   M,W,TH 12pm-7pm F 3pm-1am Sat,Su 10am-6pm

games: Special Events designed for military simulation and entertainment Airsoft enthusiast team and public use

size: 17,000 sqft.

user: law enforcement military civilian

Shadow Tactical Oprations Center 324 Yolanda Ave Unit B Santa Rosa, CA 95404 707-578-9600 http://www.shadowtactical.

games: CQB, airsoft, gaming

size: 6,000 sqft.

user: law enforcement military civilian

Tactical Airsoft Center address:T.B.A. phone number:T.B.A. http://www.airsoftcenter.net

"The armies version of Grand Theft Auto appea to our young soldiers"
-officer who used JFETS

"The Contrusction of the module was superb and made me feel like I was back in Bagdad."
-soldier who used JFETS

ict.usc.edu/ The University of Southern California Institute for Creative Technologies

Pandemic Studios LLC.

FSW army training XBOX **FSW for PS2**

Japan imposed export controls on Playstation II becasue the graphics card was capable of such precision that it could guide a cruise missle

-Richard Re Playstation to Detonation

civil simulation: AIRSOFT

Combat sport whose primary objective is to shoot opponent with gas filled plastic bb's. Scenarios range from Close Quarters Battle training, Search and Rescuse, Sniping, and capture the flag. This sport is played by military simulation game enthusisasts for recreation, as well as law enforcement and military personel for training purposes. Currently, there are facilities that accomadate recreation and training . Architecturaly, they are banal wharehouse spaces and unmaintained outdoor fields. Airsoft as recreation and training simulatneously and adjacent begins to play out potential immersive relationship training can have with recreation

war time production meets production of a recreational lifestyle

During World War II the United States experienced an unprecedented period of growth for the industrial economy. Companies such as Alcoa, Boeing, and others were primarily manufacturing products to sustain the war machine. Once the war came to an end these companies had to retool themselves to cater to a postwar recreational economy. Below is a timeline indicat-

1946
Monsanto adapts new plastics to peacetime production such as womens cosmetics

1956
Alcoa production focuses on recreational lifestyle

1939 — **1945**

1956

1966

1941-43
Monsanto develops plastics better suited for war such as GRP which protected radar on planes and ships

1944
100% of Alcoa production was fabrication of war planes

Mission 66
10 year program that was intended to dramatically expand NPS visitor services by 1966, in time for the 50th anniversary of the establishment of the Park Service

All photos from *Cold War Hot Houses: From Cockpit to Playboy.* Princeton Architectural Press 2004 (see "sources")

Mission 66: park as a patriotic experience

With the end of World War II recreation to center stage in the typical American family. For this reason America's system of national parks orginally conceived in the early 20th century was streched very thin in terms of infrasture. Therefore, Eisenhower developed Mission 66 whose primary objective was to asses the needs of America's national parks service in relation to an increasing postwar influx of visitors. This required conducting analysis of existing parks and improving their ability to handle the increasing amount of visitors. Mission 66 ambitiously attempted to frame the natural landscape as a desirable image easily accessible to the modern family. As a result, the park experience was more about an image to be consumed than about engaging a natural landscape.
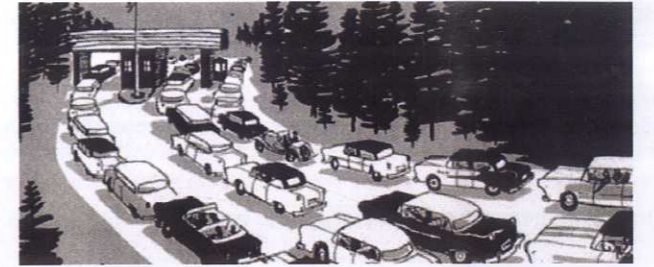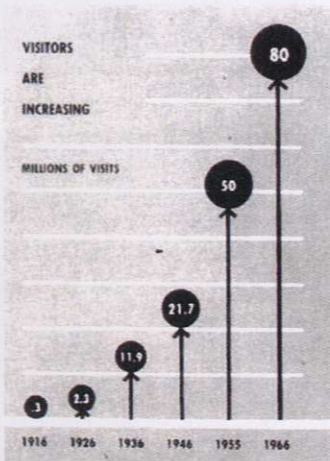
"Following World War I, recreation moved out the the cities as automobile owners embarked on weekend and holiday excursions into the American country side. The modern highway encouraged mobility and came to be associated with the very concepts of democarcy and freedom"

-Jeannie Kim from Coldwar Hothouses

VISITORS ARE INCREASING

MILLIONS OF VISITS

80

50

21.7

11.9

.3 2.3

1916 1926 1936 1946 1955 1966

"Women want good trails, trails they can walk on in high heels. Trails to points of interest should be hard surfaced and smooth enough for high heels"

-suggestions from Mission 66

Tracking Montauk's sun wind and water

Montauk, NY, gets 44 inches of rain per year. The US average is 37. Snowfall is 16 inches. The average US city gets 25 inches of snow per year. The number of days with any measurable precipitation is 93.

On average, there are 206 sunny days per year in Montauk, NY. The July high is around 80 degrees. The January low is 24. Our comfort index, which is based on humidity during the hot months, is a 49 out of 100, where higher is more comfortable. The US average on the comfort index is 44.

Climate	Montauk, NY	United States
Rainfall (in.)	43.8	36.6
Snowfall (in.)	15.5	25.2
Precipitation Days	93	101
Sunny Days	206	205
Avg. July High	79.7	86.5
Avg. Jan. Low	23.7	20.8
Comfort Index (higher=better)	49	44
UV Index	3.7	4.3
Elevation ft.	10	1,062
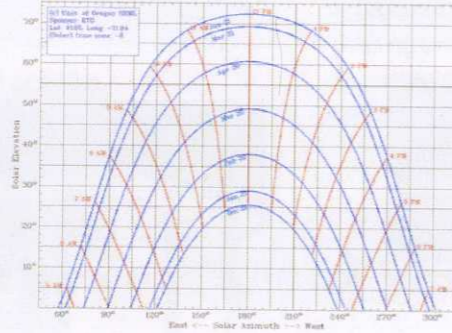
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Suffolk Co AFB	DIR	NW	NW	NNW	SW	SW	SW	SW	SW	SW	SW	W	W	SW
	SPD	10	10	10	10	9	9	8	8	9	9	9	9	9
	PGU	58	61	60	58	43	40	44	40	76	48	62	61	76

NATIONAL CLIMATIC DATA CENTER
151 PATTON AVENUE ROOM 120
ASHEVILLE, NC 28801-5001
(NCDC)
PHONE : (828) 271-4800 INTERNET : orders@ncdc.noaa.gov
FACSIMILE : (828) 271-4876 WEB site : http://www.ncdc.noaa.gov
November 1998

Indexing exisiting surface conditions and ecologies
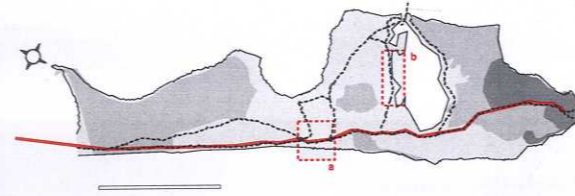
COMMUNITIES and ECOSYSTEMS

Marine Rocky Intertidal
Maritime Interdunal Swales
Maritime Heathland
Maritime Grassland
Maritime Shrubland
Maritime Oak-Holly Forest
Successional Maritime Forest

ANIMAL CONCENTRATION AREAS
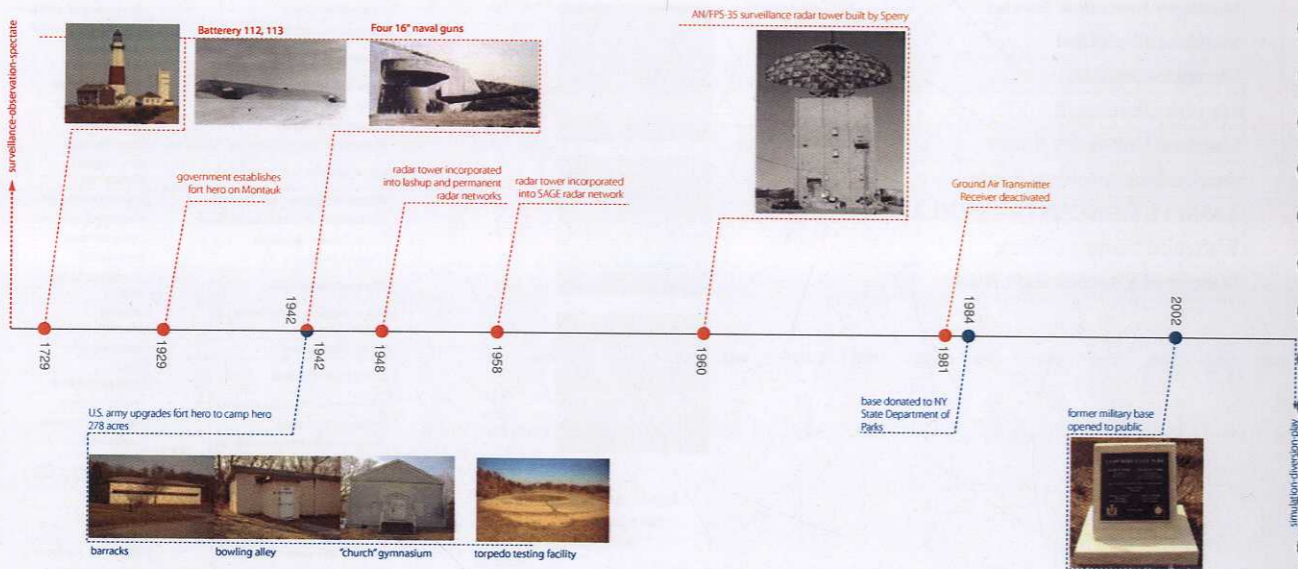
Waterbird Nesting Colony
Waterfowl Concentration Area

VASCULAR PLANTS	
Schizaea pusilla	curly-grass fern
Carex hormathodes	necklace sedge
Carex mesochorea	midland sedge
Carex mitchelliana	Mitchell's sedge
Cyperus polystachyos var. texensis	coast flatsedge
Eleocharis halophila	salt-marsh spikerush
Eleocharis tuberculosa	long-tubercled spikerush
Fimbristylis castanea	marsh fimbry
Lipocarpha micrantha	dwarf bulrush
Arethusa bulbosa	swamp pink
Platanthera ciliaris	orange fringed orchid
Platanthera cristata	crested yellow orchid
Spiranthes vernalis	grassleaf ladies'-tresses
Sesuvium maritimum	seabeach purslane
Hydrocotyle verticillata	water-pennywort
Ligusticum scothicum	scotch lovage
Eupatorium hyssopifolium var. laciniatum	fringed boneset
Liatris scariosa var. novae-angliae	New England blazing-star
Viburnum dentatum var. venosum	southern arrowwood
Minuartia (=Arenaria) caroliniana	pine-barren sandwort
Helianthemum dumosum	bushy rockrose
Cuscuta pentagona	field-dodder
Pycnanthemum torrei	Torrey's mountain mint
Pycnanthemum verticillatum var. verticillatum	whorled mountain-mint
Linum intercursum	sandplain flax
Oenothera oakesiana	Oakes' evening-primrose
Plantago maritima ssp. juncoides	seaside plantain
Polygonum glaucum	seabeach knotweed
Polygonum hydropiperoides var. opelousanum (=P. opelousanum)	northeastern smartweed
Rumex hastatulus	heart-winged sorrell
Hottonia inflata	featherfoil
Lysimachia hybrida	lance-leaved loosestrife
Amelanchier nantucketensis	Nantucket juneberry
Oldenlandia uniflora (=Hedyotis uniflora)	clustered bluets
Agalinis acuta	sandplain gerardia
Agalinis virgata	pine-barren gerardia

[s]ite: intrinsic trajectories on Montauk

chronological taxonomy of tracking and testing artifacts on Montauk's former military base

Montauk's lighthouse built in 1796 under George Washington is the first instance of tracking on the site. Traininng and tracking plays out up until the end of the Cold War when the radar antennae was disabled. The site experienced a long dure between 1980-2002 when the base was officially declared a national park.

surveillance-observation-spectate

Batterery 112, 113

Four 16" naval guns

AN/FPS-35 surveillance radar tower built by Sperry

government establishes fort hero on Montauk

radar tower incorporated into lashup and permanent radar networks

radar tower incorporated into SAGE radar network

Ground Air Transmitter Receiver deactivated

1729   1929   1942   1948   1958   1960   1981   1984   2002

1942

U.S. army upgrades fort hero to camp hero 278 acres

base donated to NY State Department of Parks.

former military base opened to public

simulation-diversion-play

barracks   bowling alley   "church" gymnasium   torpedo testing facility

Measuring components of Montauk military base

battery 112
77,500 sqft.

battery 113
77,500 sqft.

east hampton affordable housing
29 acres

cold war SAGE radar antennae

WWII camouflage tow
2.8 acres

Tracking historical recreation and military activity on Montuak

Montauk Manor

montauk as resort: *"Miami in the summer Montauk in the Winter"*

"Now Montauk Beach, through the vision and resources of a group of distinguished builders, is being transformed into **America's finest out-of-door center, where the real aristocrats of modern America may find new health, new relaxation, new ways to play** amid luxurious surroundings."

-Carl Fisher from 1932 promotional brochure

All photos from Montauk Historical Society

Espionage

Military training facility camouflaged as East Hampton fishing village

montauk as site of national defense: from 1796-1980

George Washington authorized the contruction of lighthouse for **nautical observation** and national defense. 1942 Montauk beach was host to **german espionage campaign** which led to the construction of observation bunkers now visible in Shadmoor State Park, and Camp Hero was outfitted with 2 antimissle batteries with 4 gun emplacments never used but still remain in Camp Hero State Park, and 1960 Sperry built radar antennae for **air defense against soviet nuclear bombers** during the Cold War
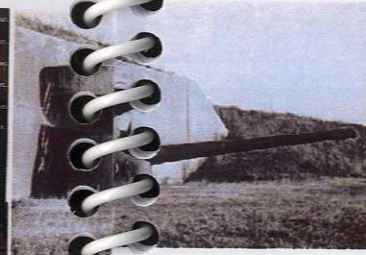
Montauk Historical Society

Montauk Historical Society

personal photo

google earth

Montauk Historical Society

Jackie Onassis at the Lightouse

Cocaine Cowboys directed by Andy Warhol filmed on his estate in Montauk

Black and Blue recored by Rolling Stones in Montauk

montauk as artistic retreat: from Warhol to Memory Motel

Montauk Historical Society

Photo of Andy Warhol by Peter Beard

NY Times

www.imdb.com
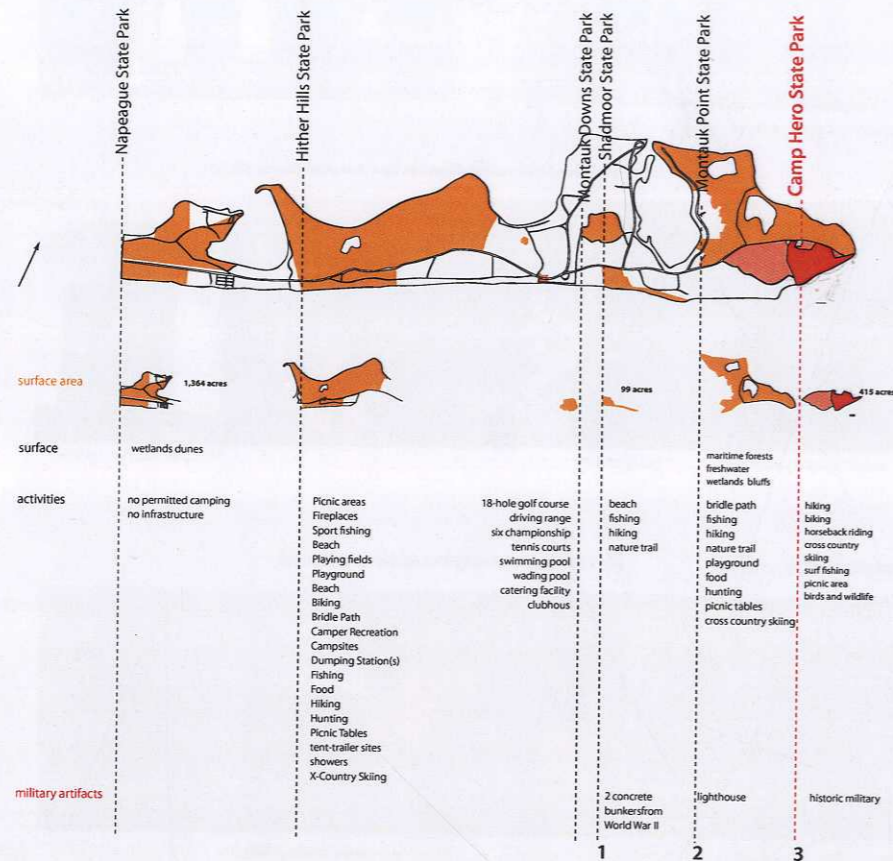
www.montauk-life.com

[s]ite: intrinsic trajectories on Montauk

Tracking recreation in Montauk: 6 state parks: 2,300 hotel rooms

60% of Montauk's surface area is open park space. With more than 2,300 year-round or seasonal hotel/motel rooms, Montauk has by far the largest number and concentration of hotel/motel rooms of any single community on Long Island.
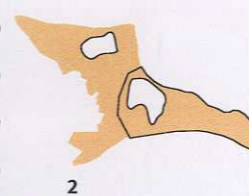

Shadmoor State Park

1

Montauk Point State Park

2

Camp Hero State Park

surveillance radar tower built by Sperry

Four 16" naval guns

Montauk Historical Society

3

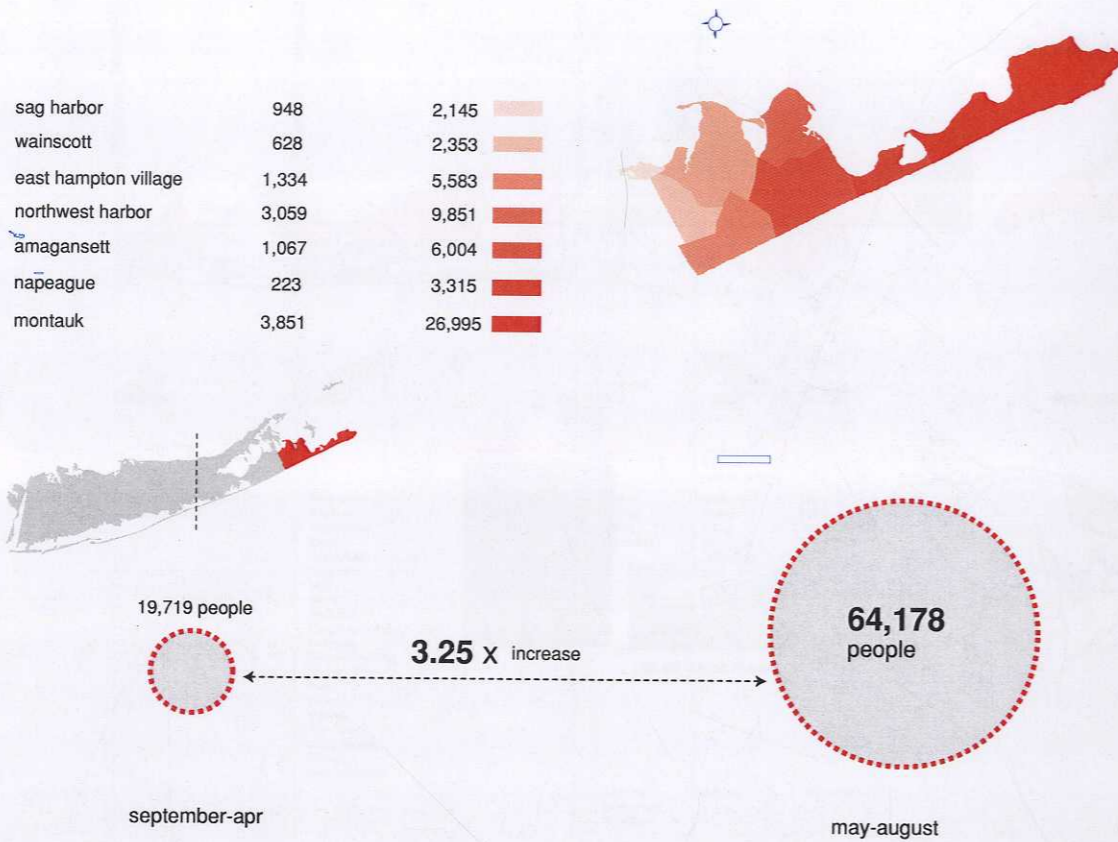|	Napeague State Park	Hither Hills State Park	Montauk Downs State Park / Shadmoor State Park	Montauk Point State Park	Camp Hero State Park
surface area	1,364 acres		99 acres	415 acres	
surface	wetlands dunes			maritime forests freshwater wetlands bluffs	
activities	no permitted camping no infrastructure	Picnic areas Fireplaces Sport fishing Beach Playing fields Playground Beach Biking Bridle Path Camper Recreation Campsites Dumping Station(s) Fishing Food Hiking Hunting Picnic Tables tent-trailer sites showers X-Country Skiing	18-hole golf course driving range six championship tennis courts swimming pool wading pool catering facility clubhous / beach fishing hiking nature trail	bridle path fishing hiking nature trail playground food hunting picnic tables cross country skiing	hiking biking horseback riding cross country skiing surf fishing picnic area birds and wildlife
military artifacts			2 concrete bunkers from World War II	lighthouse	historic military
			1	2	3

[s]ite: intrinsic trajectories on Montauk

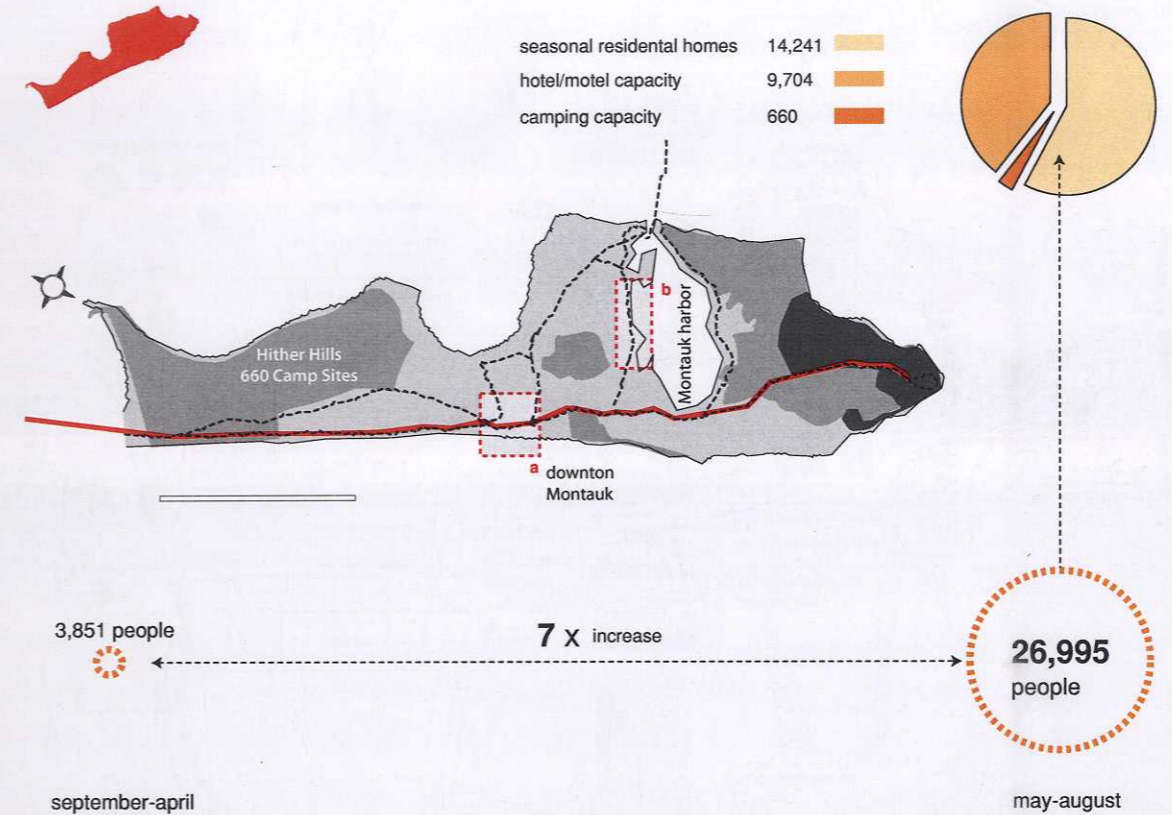## East Hampton EXpands: seasonal population influx from May-August

Montauk is one of 7 villages a part of East Hampton and the exorbitant influx of tourists from May to August puts a significant stress on the infrastructure, [utilities, transportation, services], on the island. Therefore, the MIL-CIV immersive surface will be flexible enough to adapt to these drastic changes in density from summer to winter.

sag harbor	948	2,145
wainscott	628	2,353
east hampton village	1,334	5,583
northwest harbor	3,059	9,851
amagansett	1,067	6,004
napeague	223	3,315
montauk	3,851	26,995

19,719 people

3.25 x increase

64,178 people

september-apr

may-august

Montauk EXpands: distribution of seasonal population influx from May-August

Majority of Montauk vacationers rent private homes, but there is still a huge demand for young adults and families to camp at Hither Hills or book hotel rooms. Camping on the beach is very popular and campers must make reservations up to one year in advance. This 7-fold increase in population over the summer transforms Montauk into a very dense summer destination.
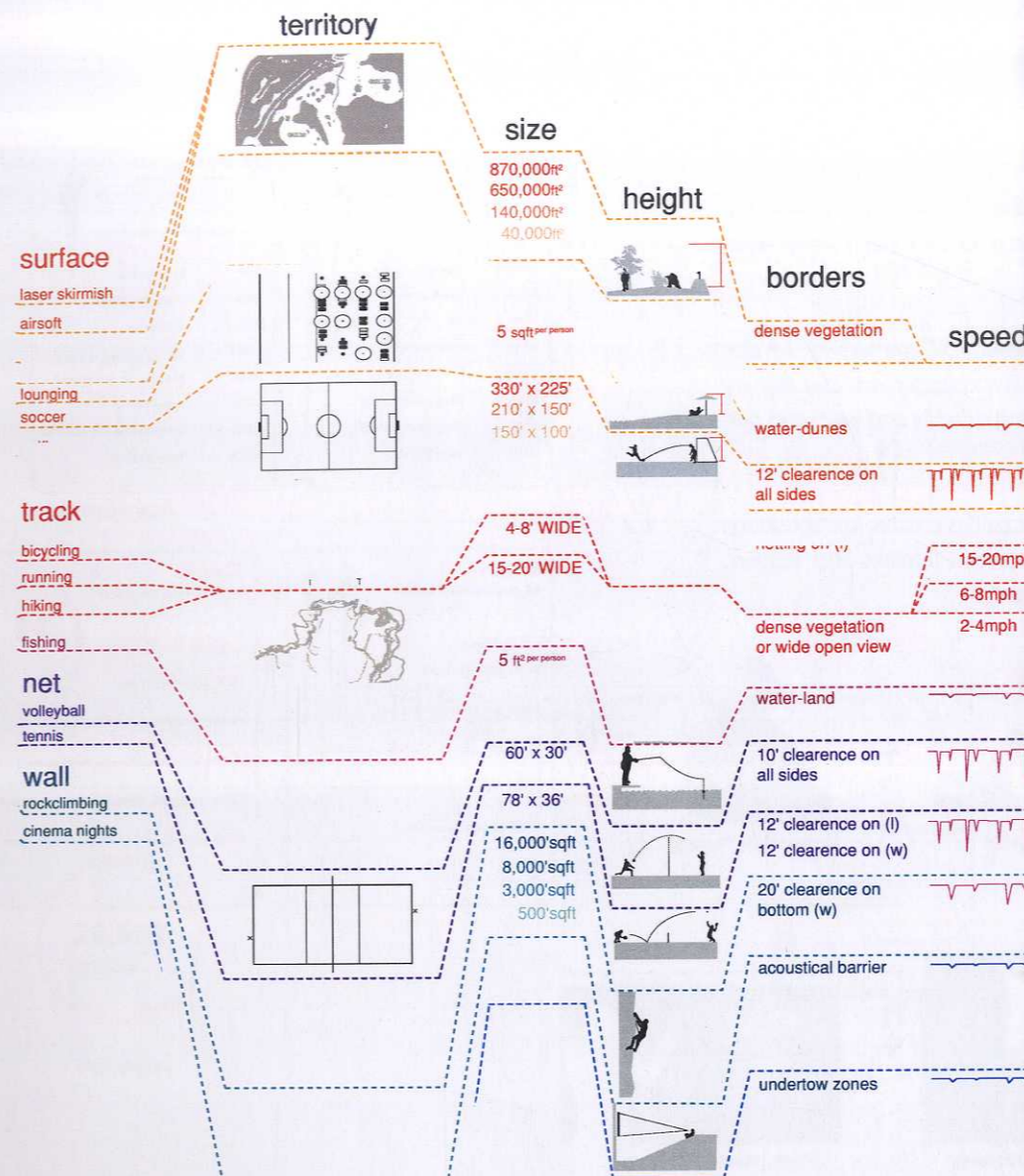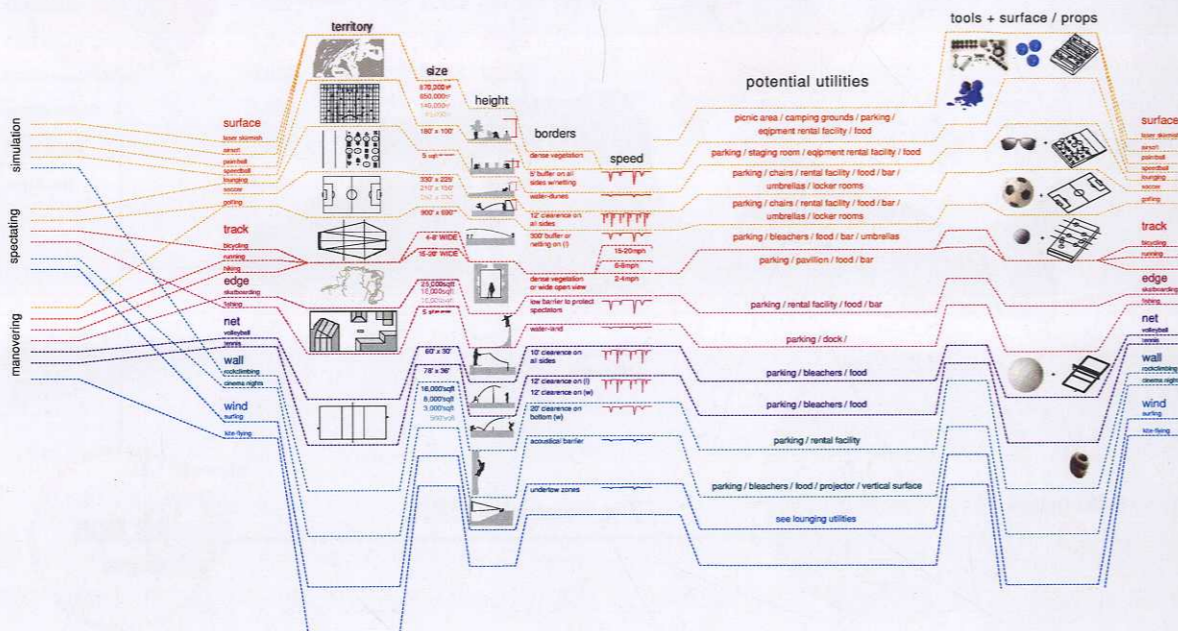
seasonal residental homes	14,241
hotel/motel capacity	9,704
camping capacity	660

Hither Hills
660 Camp Sites

Montauk harbor

a downton Montauk

b

3,851 people

7 x increase

26,995 people

september-april

may-august

[s]ite: intrinsic trajectories on Montauk

Program modulator: simulation, tracking, and the strategic manouver

The program modulator analyzes **surface, track, edge, net, wall,** and **wind** games in terms of there **territory, size, height, borders, speeds, tools** and support facilities. After developing the intineraries [p. 26-27], certain games were ruled out, because they did not connect in any direct way with the immersive scenarios that were explored. The right page zooms in on the activites that still correspond with the MIL_CIV immersive surface.

Left diagram

simulation
spectating
manouvering

territory

size
870,000sqft
650,000
140,000
40,000

height
180' x 100'

borders
dense vegetation
5' buffer on all sides wrestling

speed

tools + surface / props

potential utilities

surface
laser skirmish
airsoft
paintball
speedball
lounging
soccer
parking

330' x 225'
210' x 150'
150' x 100'

water-dunes

12' clearance on all sides

picnic area / camping grounds / parking / eqipment rental facility / food

parking / staging room / eqipment rental facility / food

parking / chairs / rental facility / food / bar / umbrellas / locker rooms

parking / chairs / rental facility / food / bar / umbrellas / locker rooms

surface
laser skirmish
airsoft
paintball
speedball
lounging
soccer
parking

track
bicycling
running
hiking

900' x 690'

4-8' WIDE
15-20' WIDE

300' buffer or netting on (l)
5-8mph
2-4mph

parking / bleachers / food / umbrellas

track
bicycling
running

edge
skateboarding
horses

23,000sqft
12,000sqft
16,000sqft
6,000sqft

dense vegetation or wide open view
low barrier to protect spectators

parking / pavilion / food / bar

edge
skateboarding
horses

net
volleyball
tennis

60' x 30'
78' x 36'

water-land

10' clearance on all sides

parking / rental facility / food / bar

parking / dock /

net
volleyball
tennis

wall
rockclimbing
cinema nights

8,000sqft
3,000sqft
500sqft

12' clearance on (l)
20' clearance on bottom (w)

parking / bleachers / food

parking / bleachers / food

wall
rockclimbing
cinema nights

wind
surfing
kite-flying

acoustical barrier

parking / rental facility

wind
surfing
kite-flying

undertow zones

parking / bleachers / food / projector / vertical surface

see lounging utilities

Right diagram

territory

size
870,000ft²
650,000ft²
140,000ft²
40,000ft²

height

borders

speed

surface
laser skirmish
airsoft
lounging
soccer

5 sqft per person

330' x 225'
210' x 150'
150' x 100'

dense vegetation

water-dunes

12' clearance on all sides

track
bicycling
running
hiking
fishing

4-8' WIDE
15-20' WIDE

5 ft² per person

netting on (l)

15-20mph
6-8mph
2-4mph

dense vegetation or wide open view

water-land

net
volleyball
tennis

60' x 30'
78' x 36'

10' clearance on all sides

wall
rockclimbing
cinema nights

16,000'sqft
8,000'sqft
3,000'sqft
500'sqft

12' clearance on (l)
12' clearance on (w)

20' clearance on bottom (w)

acoustical barrier

undertow zones

Integrating recreation and training

Itineraries integrate the relationship between training and recreation to create an immersive experience that isn't just about going to the beach, but about participating in a recreational military experience.

Participants in the MIL_CIV immersive surface range from regional law enforcement and military personel as well as single family and weekend getaway vacationers.

The sequencing of activities creates juxtapositions and intersections between families and soldiers, CQB training and fishing.

Sunday family picnic

+

Virtual Reality Therapy*

RADAR rooftop flim series

+

MIL_Simulation Training

* Photo from: ict.usc.edu/ The University of Southern California Institute for Creative Technologies

10 hours
mil_civ immersive training

mil-sim game enthusiast

10:00	staging for Airsoft
10:30	Airsoft game
12:30	Eat
13:30	Target practice
14:30	Immersive Simulation Gaming
16:00	Watch mil-sim training
18:00	Happy Hour with soldier
20:00	Radar film festival

13 hours
mil_civ immersive training

U.S. army soldier itinerary

7:00	fitness training
9:00	staging for CQB training
9:30	CQB training
12:00	Eat
13:00	immersive simulation training
17:00	tactical seminar
18:00	drink and monitoring vacationes
20:00	Radar film series

6 hours
mil_civ immersive recreation

young lovers

11:00	hike to picnic spot
12:00	eat and monitor waves
12:30	climb radar tower and watch target practice
16:00	hike to lighthouse and track the sunset
17:00	dance in mil sim room

5 hours
mil_civ immersive recreation

single family vactioners

10:00	begin at lighthouse
10:30	hear and watch military CQB training
11:30	eat on battery 113 above mil-sim gaming
12:30	begin hiking tour of military industrial complex
15:00	play family version immersive simulation game

3,851 people

september-april

26,995 people

may-august

MIL_CIV immersion projected trajectories

25
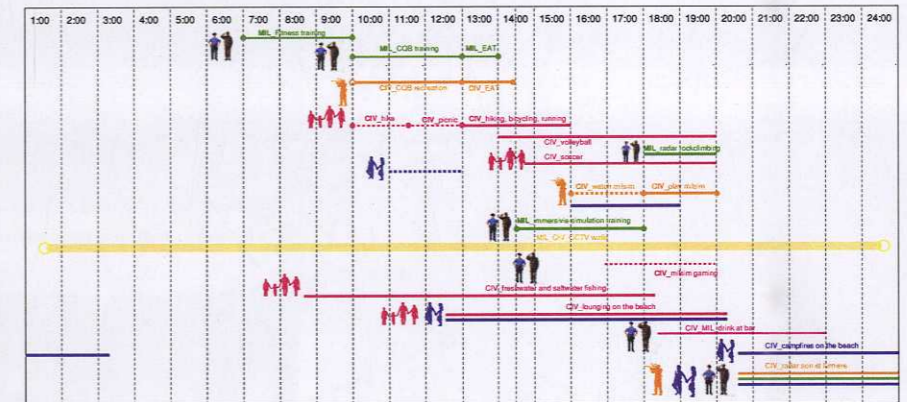
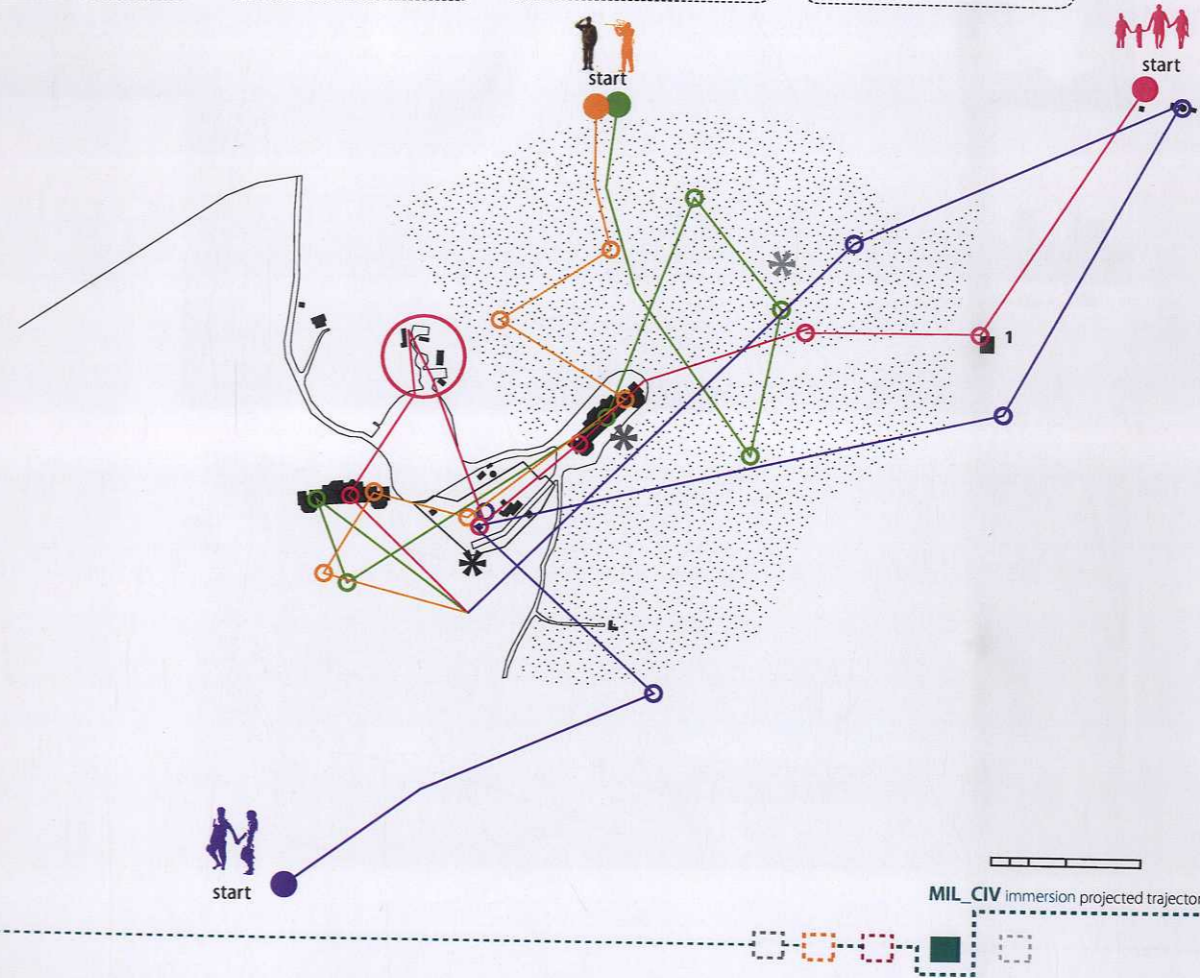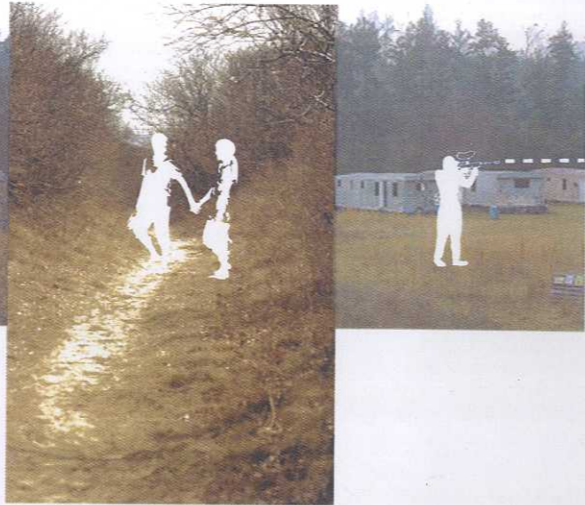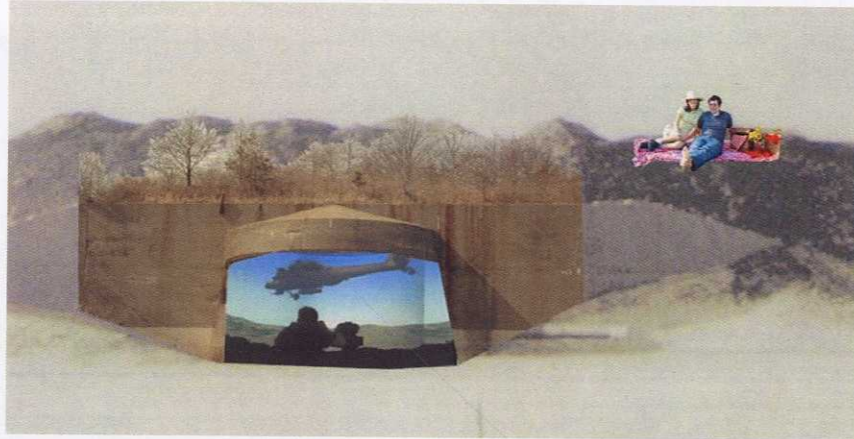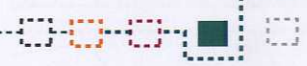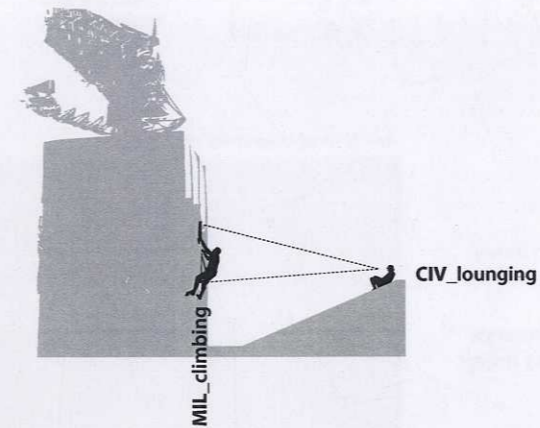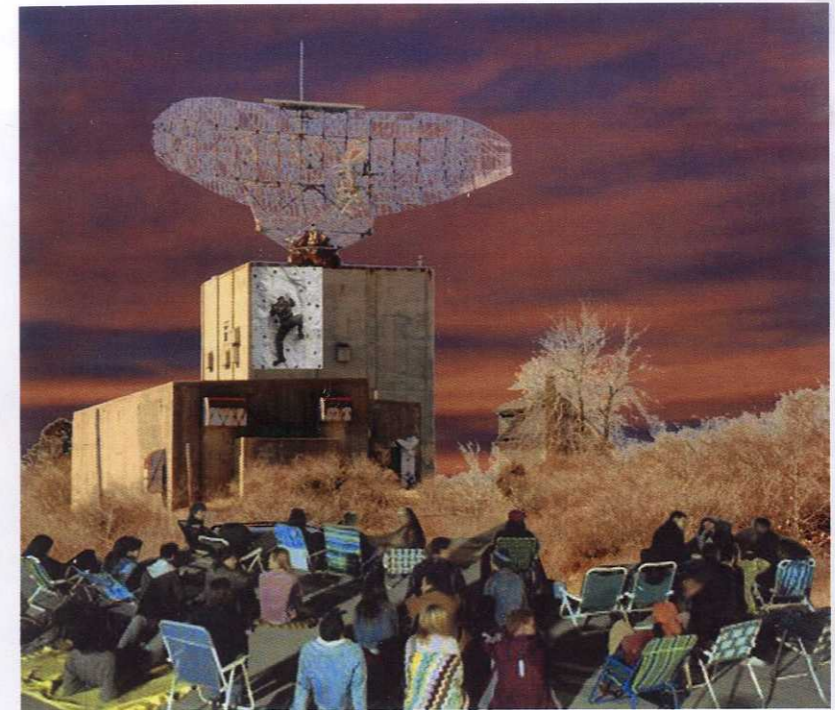## Mapping intersections, overlaps, and adjacencies

The 4 itineraries signify the different particiapnts in the MIL_CIV surface. Potential sequences are mapped onto the sight. Intersections suggest gathering zones between different participants. Adjacencies suggest passive integration between different activities such as watching and listening. The ideograms diagrammaticaly image intersection and adjacency.
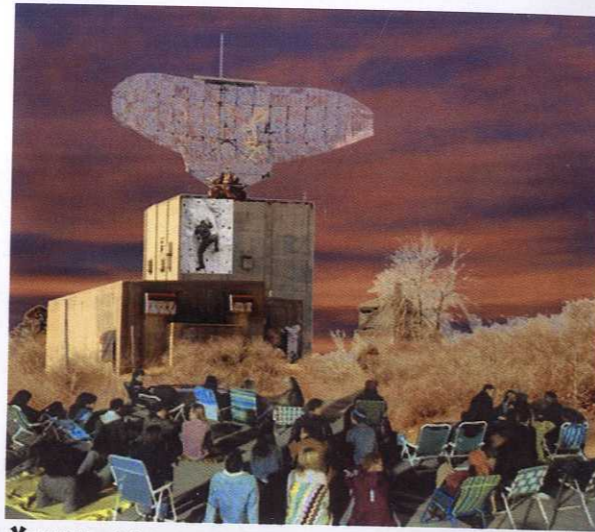
✳ RADAR rockclimbing / RADAR cinema

✳ Picnic on top of MIL_simulation training
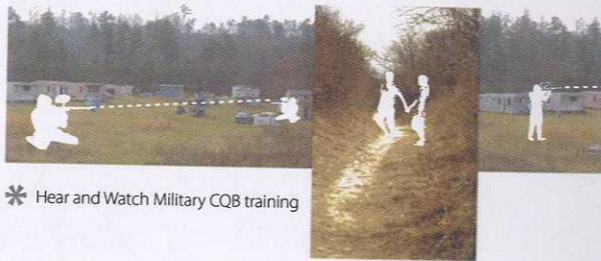
✳ Hear and Watch Military CQB training

10 hours
mil_civ immersive training

mil-sim game enthusiast

10:00	staging for Airsoft
10:30	Airsoft game ✳
12:30	Eat
13:30	Target practice
14:30	Immersive Simulation Gaming ✳
16:00	Watch mil-sim training
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13 hours
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start

start

start

MIL_CIV immersion projected trajectories

Hear and Watch Military CQB training

CIV_hike

MIL_CQB airsoft training   **CIV**_airsoft game

Picnic on top of MIL_simulation training

RADAR rockclimbing / RADAR cinema

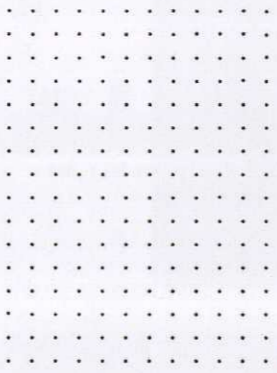MIL_climbing   **CIV_lounging**
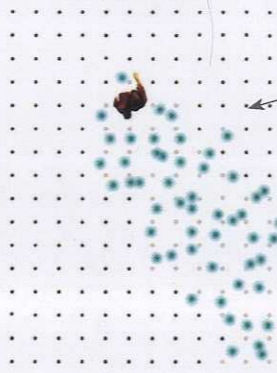
MIL_CIV immersion projected trajectories

surface as **field network**

sensory embedded surface that reacts to way people inhabit or occupy the space, and potentially can begin to visually connect discrete events occuring on the site. These light and sound techniques could start to integrate milsim gaming with the activity fields. As these techniques disperse across the project the empheral aural and visual effects can begin to network activites such as dancing and milsim gaming.

ephemeral visual networks

field

field reacting to movement
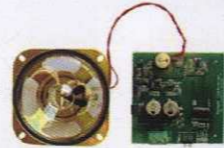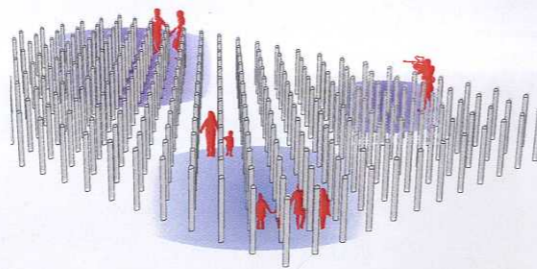
speaker embedded below grade in each fiber optic stalk

fiber optic stalks have embedded sensors which illuminate LED lights and speakers emit 'white noise' as people pass through
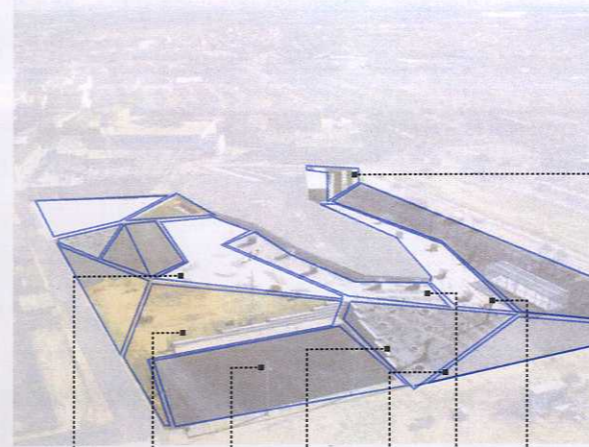
Howeler + Yoon Architecture
White Noise White Light Athens Greece 2004
50'x50' grid

interactive sound and light field that responds to movement of people as they walk through

field composed of fiber optic stalks that track presence and movement of people and transmit light and noise from speakers embedded in the surface

*plan and photos from www.hyarchitecture.com

view of White Noise White Light at Dusk

surface **maps programmatic variation**

Patchwork of different activities play out adjacent to one another due to variation in materials. Triangulations created potential convergences between different activities. Multiple games can play out simultaneously hence forth creating an immersive environment.

lounge | playground | soccer | gardening | skateboarding | lounge | meeting area

Martin Lejarraga
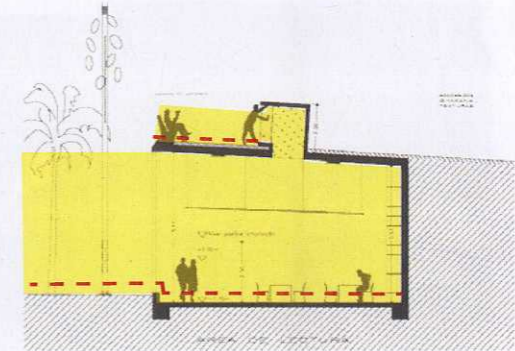Biblioteca municipal Torre Pacheo (Murcia)

Triangulations and material variation in artificial surface topography map different means of occupy space ranging from basketball to reading.

Artificial ground plane has a double use as a roof for library as recreational surface

section cut through roof surface and ground plane

View on roof deck into skylights

*from AV Monographs 2007

MIL_CIV immersion projected trajectories

immersive networks

The multi-screen display monitors a network of public spaces across Barcelona allowing the viewer to visually network the discrete public spaces across the city. In this context the city is understood as a wide spectrum of various densities, flows, and textures. At the MIL-CIV immersive surface, multiscreen walls could begin to network different activities at different times
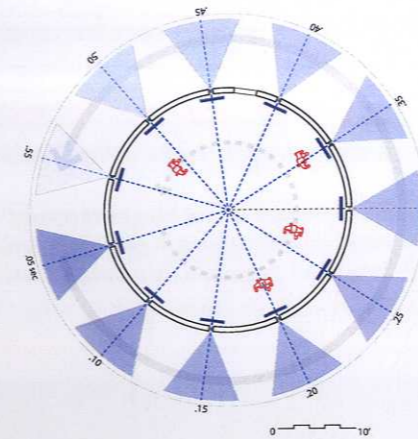

Mercat de la Boqueria   10 h 48

Barcelona Sensacions 2007
Barcelona, Spain

Exhibition synchronizes surveillance cameras in series of public spaces

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plan diagram of 11 cameras and screens

section diagram of 'time slip'
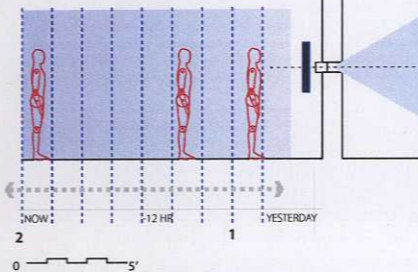
Gabby Shawcross and Jason Bruges
Memory Project 2008
London, UK [traveling UK]

The Memory Project, which is reminiscent of a Victorian cyclorama, is recording a 360-degree panorama each minute over three days.

Heat sensors detect visitors' locations and activate monitors with the images allowingpeople to control the circular, time-slip viewing gallery,
As people move towards the edge of the cylinder, photos from 17 April are displayed.

---

immersive networks

The Memory Project is an immersive space that networks simulatneous views of London in relation to the body in space due to thermal cameras that monitor movement within the 'cyclorama'. The images on the screen recede in time depending on the viewer's proximity to the screen. Different radii of circulation allow viewer to experience different panoramas in real time.

11:00 12 April 2008

22:00 13 April 2008

exterior view of Memory Project

MIL_CIV immersion projected trajectories

33

adaptive ecologies

STOSS
Riverside Park, New Bedford, Massachusetts
27 acre waterfront site

-design of ground plane was conceived for hydrologic, ecological, and programmatic adaptation

openings in the landform matrix allow for larger surfaces and the inclusion of more active programs such as sports courts playgrounds and industrial ruin gardens

dynamic performance ground for ecological growth and succession

adapt

collect
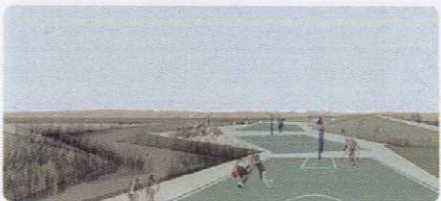
* photos and diagrams from www.stoss.net
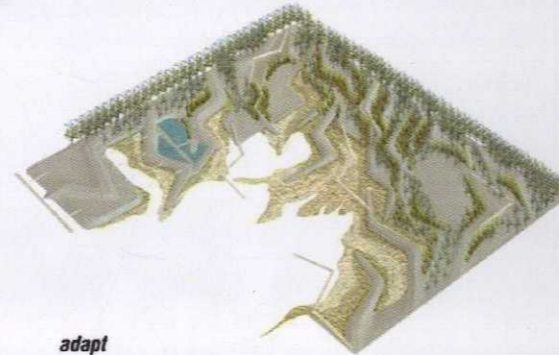
adaptive reuse

Jakob McFarlane
Dock de pe Paris, Paris, France 2007
French Fashion Institute

-transforming a turn-of-the-century dockside depot on the edge of the River Seine

The concrete grid forms a matrix for the new parts that snake around and through the orthogonal geometry, subverting and enriching. A new structural system, derived from systematic deformation of the grid, supports a skin of glass and steel as well as an enlarged, habitable roofscape

* photos from www.jakobmacfarlane.com/

* rendering from www.jakobmacfarlane.com/

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Historical photos: courtesy of Montauk Historical Society

2000 U.S. Census; Suffolk County Planning Department

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