Leon Gurevitch

Victoria University of Wellington, twitter: @Leonthevitch

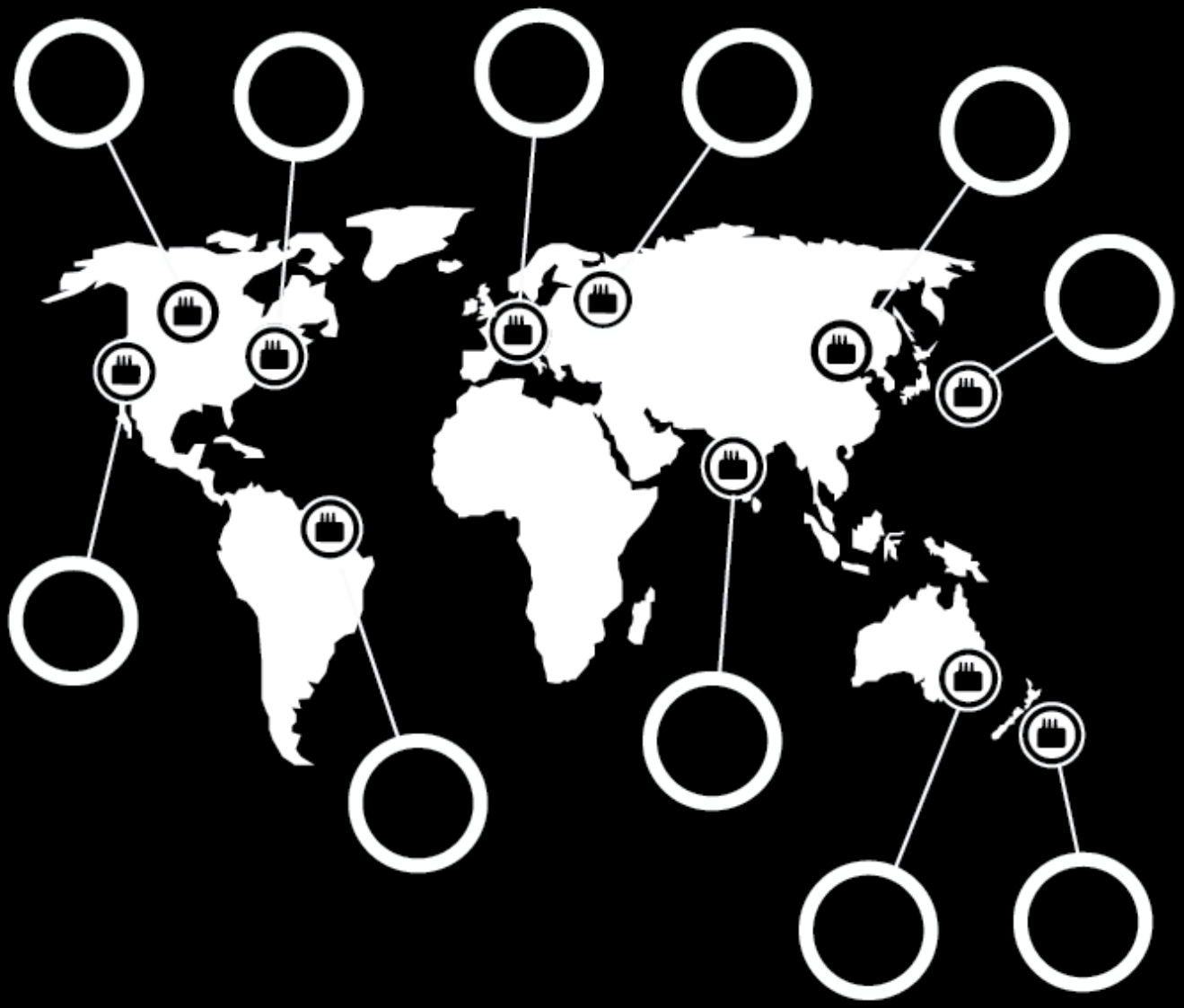
the ROYAL SOCIETY of NEW ZEALAND TE APARANGI

VICTORIA UNIVERSITY OF WELLINGTON TE WHARE WANAGA O TE UPOKO O TE IKA A MAUI

Project Overview

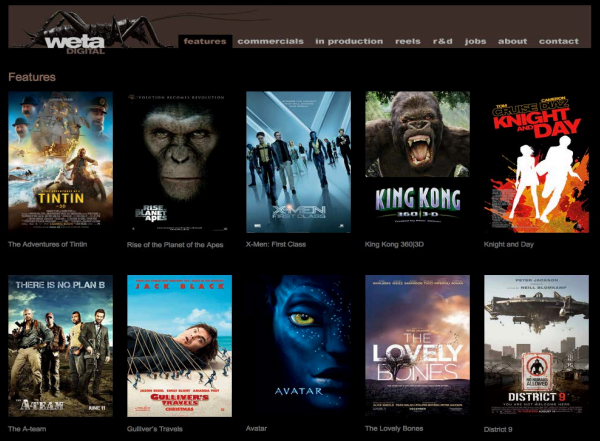
+ Marsden Research Project
+ $350,000 over 3 years
+ Media Sociology and Design Research
+ Digital Media Lab Victoria University
+ 40 Participants from Weta Digital
+ Expanded to 13,000 Global VFX migrants

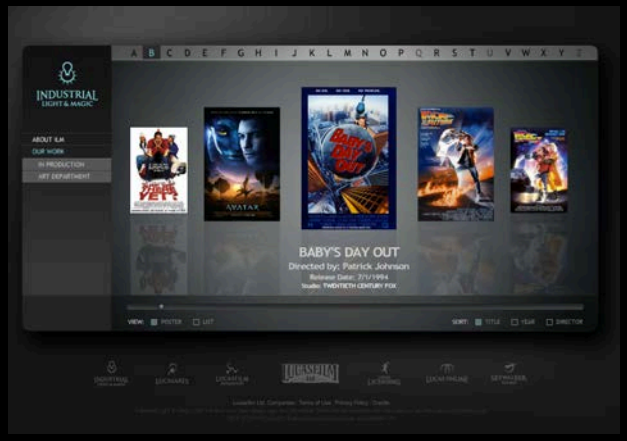
What are the Digital Workshops of the World?

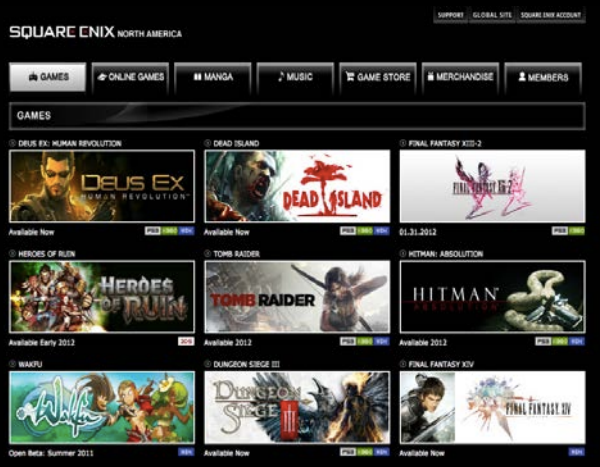


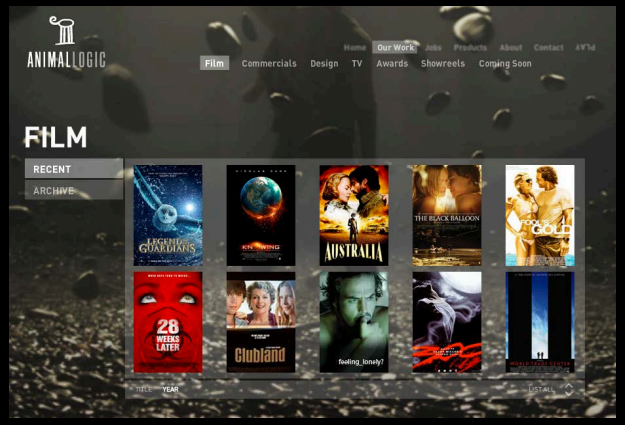
+ Hollywood VFX Production
+ AAA Game Studios
+ Major Advertising VFX
+ Cut Scene Games VFX

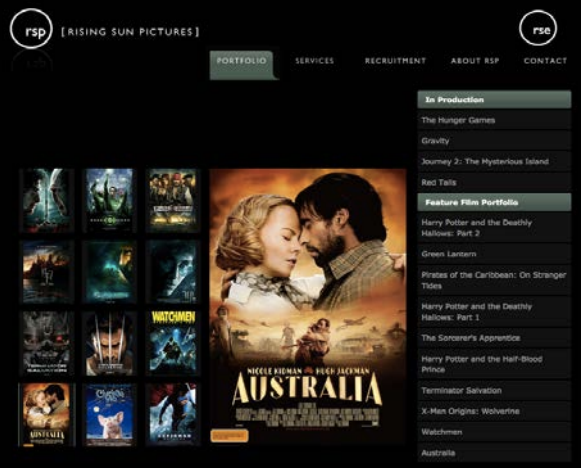
Digital workshops: movies, ads, games

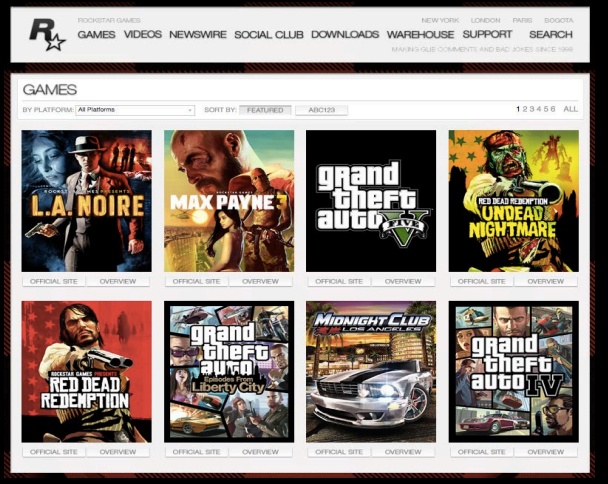













HOME
FEATURE FILM
ADVERTISING
GAMES
STEREO 3D
CAPABILITIES
ABOUT
CONTACT
CAREERS
FEATURED WORK
CASE STUDIES
DIGITAL DOMAIN
weta DIGITAL
features
commercials
in production
reels
r&d
jobs
about
contact
ANIMALLOGIC
Home
Our Work
Jobs
Products
About
Film
Commercials
Design
TV
Awards
Showreels
Coming Soon
ROCKSTAR GAMES
NEW YORK
LONDON
PARIS
BOGOTA
GAMES
VIDEOS
NEWSWIRE
SOCIAL CLUB
DOWNLOADS
WAREHOUSE
SUPPORT
SEARCH
MAKING GLIB COMMENTS AND BAD JOKES SINCE 1998

Project Origins

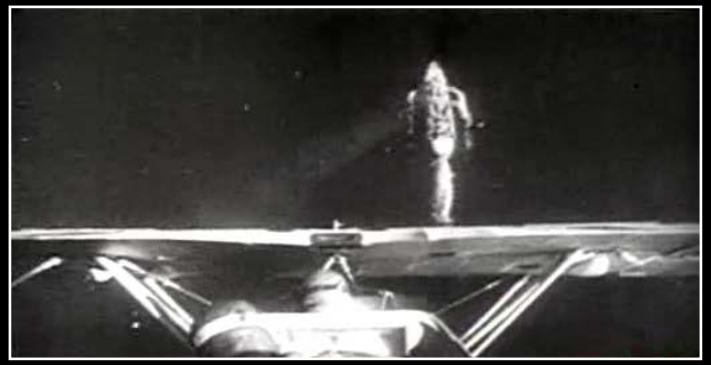
The Cinemas of Transactions

The Cinema of the Attractions

Train Leaving the Station

Coney Island Rollercoaster

WW1 Biplane Attack



The Statue of Liberty

WW1 Destroyer

Flight over New York

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SAGE

The Cinemas of Transactions: The Exchangeable Currency of the Digital Attraction

Leon Gurevitch[1,2]

Abstract

This article argues that the computerization of audiovisual culture has led to a "cinemas of transactions." Asserting that computer-generated image forms now function as a single currency across multiple audiovisual economies, this article posits a new understanding of digital attractions as constituting a cinemas of transactions. Neither a singular, unitary "cinema" nor a singular "transaction," the cinemas of transactions constitutes a complex and multiply interrelated system of textual, technological, aesthetic, and economic developments whereby computer-generated attractions and promotional practices span many media and textual forms. Most importantly, however, the cinemas of transactions does not represent a radical break from past configurations of cinematic and audiovisual promotional history; rather (as the name suggests), it represents the continuation of a relationship initiated at the inception of cinema history.

Keywords

film, advertising, digital image, CGI, product placement, merchandising, cinema of attractions, train effect, audiovisual culture, digitextual, YouTube

In 1898 the Edison Manufacturing company produced and released an actuality called *Dewar's—It's Scotch*. The film, like many other early actualities, featured one subject, was filmed in one shot, and was presented to its audience (to paraphrase Gunning) as fascinating for its illusory powers alone (Gunning 1994). Running to about fifty seconds in length, the film featured four men in kilts dancing in front of a banner

[1]Victoria University, Wellington, New Zealand
[2]Lancaster University, Lancaster, UK

Corresponding Author:
Leon Gurevitch, Victoria University of Wellington, Digital Media Design Lab, The School of Design, Vivian Street, Wellington, PO Box 600, New Zealand
Email: leon.gurevitch@vuw.ac.nz

The Renaissance of the Attraction

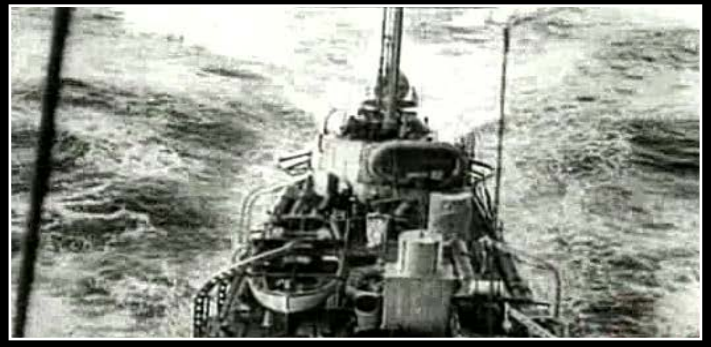
Train Leaving the Station

The Island

WW1 Biplane Attack

Pearl Harbour

WW1 Destroyer



Titanic

The Renaissance of the Attraction

Coney Island Rollercoaster

Polar Express

The Statue of Liberty

The Lord of the Rings

Flight over New York

The Lord of the Rings

The Renaissance of the Attraction

Gorge Railway

The Abyss

Metropolis

Spiderman

How it Feels to be Run Over

Toy Story

The Cinema of Attractions

Characterised by

Mass production and consumption of mechanically reproduced image.

Representation of the newly emerging spaces of modernity.

The emergence of a new relationship between mechanically reproduced objects/spaces and mechanically reproduced representations of these objects/spaces.

The Cinemas of Transactions

Characterised by

Individuated consumption of the algorithmically searchable and database storable image.

Fabrication of the new digitally engineered spaces of audiovisual culture.

The emergence of a new relationship between product design engineered objects/spaces and digital reproduction and access to these objects/spaces.

Attraction as Advertisement: Advertisements as Attractions

Film appeared as one attraction on the vaudeville programme, surrounded by a mass of unrelated acts in a non-narrative and even nearly illogical succession of performances. Even when presented in the nickelodeons that were emerging at the end of this period, these short films always appeared in a variety format, trick films sandwiched in with farces, actualities, 'illustrated songs', and, quite frequently, cheap vaudeville acts.

Tom Gunning, 'The Cinema of Attractions'

Attraction as Advertisement

Dewars Its Scotch, 1897

Digital Attractions and Advertising

Guinness Advert

Fight Club

Guinness Advert

The Lord of the Rings

Smirnov Advert

The Matrix

Citroën Advert

Transformers

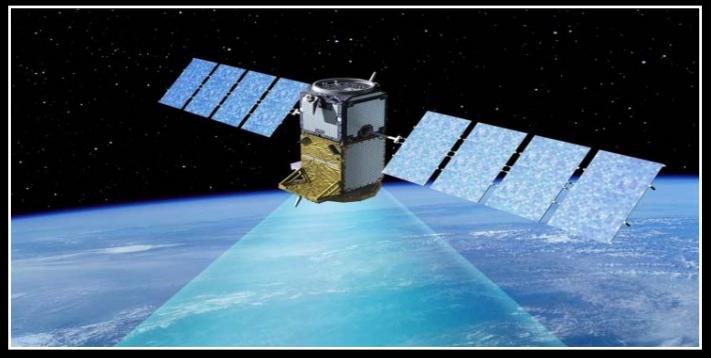
Airbus Promotion

Titanic Film/Trailer

Sochi Olympic Promotion

The Return of the King Film/Trailer

ESA Promotion



Independence Day Film/Trailer

NASA Promotion

Apollo 13 Film/Trailer

Where is the Data?

There isn’t even small data here

Count of person	Column Labels																		
Row Labels	Animation	Camera	Code	Color	Compositing	Creatures/Ri	CTO	Effects	Environment	Layout	Lighting	Massive	Matte Painti	Mo-Cap	Modeling	Pipeline Syst	Pre-Vis	Production	R&D
Animal Logic					10	2		1			3			1	1	1			
Asylum		3			2			1											
CA Scanline Production								2							1				
CafeFX	1				4			1											
Cinesite	3	3			15			6		1	4	1							
Digital Domain	4		3		20	3	1	9			4		2		1				
Double Negative	7	3			29			9			6				2		1		
Dream Quest Images					2						1		1					1	
Framestore	2				5	1		5	1		2	2	1	2					
Framestore CFC	3				5	3		1			5				4	1			
Fuel VFX		1			8			1			1								
Giant Killer Robots					1			4											
Hydraulx					2			1			1								
Image Engine Design					5						3				2		1		
Industrial Light & Magic (ILM)	7	2		1	22	4		16		1	3		5			2		1	2
Luma Pictures	1	1			1			1			1				2				
Method Studios					4														
Mill Film	1				6			1											
Moving Picture Company								1											
MPC	3				29			9	2	4	10		1	2	4			2	1
Peerless Camera Company	4				2			1											
Pixomondo		2			6			3					1						
Rainmaker	1																		
Rhythm & Hues	14	6			8	1		3			15		3		4			1	
Rising Sun Pictures	3	3			17			8			2		2		1		1		1
Rodeo FX								1					1						
ScanlineVFX		1			1			1											
Sony Pictures Imageworks (SPI)											1								
SPI	2				7	2		3			4					1			
The Orphanage					2	1					1		2		1				
Tippett Studio	3				6	8		1			3				1	1			
Grand Total	59	25	3	1	219	25	1	90	3	6	70	3	19	5	24	6	3	5	4

	code department supervisor	8
	code facial set-up	1
	code operations manager	2
	code team	5
	code/camera coordinator	1
	color & lighting technical director	5
	color and lighting	1
	color and lighting technical director	9
	color grader	2
	color timer	6
	color timing supervisor	8
	colour timer	1
	comp research and development	1
	composite artist	4
	composite designer	2
	composite supervisor	8
	composite/digital effects supervisor	1
	compositing	1
	compositing & lighting TD	1
	compositing and lighting	8
	compositing and roto artist	2
	compositing arist	1
	compositing artist	48
	compositing assistant technical director	3
	compositing coordinator	4
	compositing department	25
	compositing department manager	2
	compositing department production manager	5
	compositing department supervisor	1
	compositing head of department	2
	compositing hod	1
	compositing lead	21
	compositing production manager	4
	compositing sequence lead	11
	compositing sequence manager	1
	compositing sequence supervisor	9
	compositing supervisor	151
	compositing supevisor/cg lighting and effects supervisor	1
	compositing TD	1
	compositing team	34
	compositing technical director	5
	compositing/environment supervisor	1
	compositor	1100
	compositor and lighter	1
	compositor/cg lighting/effects artist/animator	5
	compositor/paint artist	2
	computer animator	16
	computer effects artist	1
	computer graphic artist	6

Camera	1.0867E+12	MPC	los angeles	california
Mo-Cap	1.13655E+12	Rhythm & Hues	los angeles	california
Compositing	1.0867E+12	Framestore CFC	london	united kingdom
Effects	1.37156E+12	Framestore	london	united kingdom
Effects	1.12091E+12	Tippett Studio	san francisco	california
Lighting	1.1534E+12	Framestore CFC	london	united kingdom
	1.12506E+12	Digital Domain	los angeles	california
	1.25129E+12	CafeFX	santa maria	california
Animation	1.13655E+12	Rhythm & Hues	los angeles	california
Roto/Paint	1.33596E+12	Industrial Light & Magic (ILM)	san francisco	california
Creatures/Rigging	1.17923E+12	SPI	los angeles	california
Compositing	1.13603E+12	Digital Domain	los angeles	california
Compositing	1.13378E+12	MPC	los angeles	california
	1.24489E+12	Rising Sun Pictures	adelaide	australia
Lighting	1.33233E+12	Double Negative	london	united kingdom
Lighting	1.33233E+12	Cinesite	london	united kingdom
R&D	1.12091E+12	Double Negative	london	united kingdom
Compositing	1.10242E+12	Double Negative	london	united kingdom
Effects	1.15538E+12	Cinesite	london	united kingdom
TD	1.10095E+12	SPI	los angeles	california
Compositing	1.18217E+12	Digital Domain	los angeles	california
Textures	1.36879E+12	Digital Domain	los angeles	california
Effects	1.04202E+12	Industrial Light & Magic (ILM)	san francisco	california
Compositing	1.07356E+12	Industrial Light & Magic (ILM)	san francisco	california
Roto/Paint	1.31453E+12	Industrial Light & Magic (ILM)	san francisco	california
Roto/Paint	1.35134E+12	Moving Picture Company	los angeles	california
TD	1.07356E+12	Industrial Light & Magic (ILM)	san francisco	california
Effects	1.27453E+12	Digital Domain	los angeles	california
Compositing	1.0867E+12	MPC	los angeles	california
	1.21189E+12	CafeFX	santa maria	california
Compositing	1.06984E+12	Tippett Studio	san francisco	california
Compositing	1.08324E+12	Tippett Studio	san francisco	california
Effects	1.17923E+12	SPI	los angeles	california
Compositing	1.1165E+12	Cinesite	london	united kingdom
Compositing	1.15089E+12	Cinesite	london	united kingdom
Compositing	1.37268E+12	Cinesite	london	united kingdom
	1.32559E+12	Framestore	london	united kingdom
Textures	1.11019E+12	CIS Hollywood	los angeles	california
Compositing	1.09767E+12	Rising Sun Pictures	adelaide	australia

EDITORIAL

Revising Screen Studies

Toby Miller

Mainstream U.K. and U.S. academic screen studies is a blend of textual analysis, the psy-complexes, and a bourgeois business history that neglects a critical perspective on the division of labor. These tendencies have prevented screen studies from contributing significantly to public debate. Consider a recent content analysis published by the American Medical Association (AMA) that concerns feature-length animation films made in the United States between 1937 and 1997 and the way in which they associate legal but damaging drugs with heroic characters (Goldstein, Sobel, and Newman 1999). And another study, which noted that 1989 saw Hollywood and the tobacco industry enter a voluntary ban on product placement in live-action films—since that time, the incidence of stars smoking cigarettes in Hollywood film has increased eleven-fold, mostly to get around the problem of bans on TV commercials—a truly global marketing issue, unaddressed by screen studies (Laurance 2001). These studies received major media attention via a press conference, AMA endorsement, formal replies from studios, massive TV and newspaper coverage, and so on. How many screen studies professors or graduate students read them and contributed to media discussion?

The reason for this inability to contribute to public debate has to do with a longstanding tradition of viewing audiences as objects to be molded into citizen-subjects, civilized connoisseurs of either right or left, as the anecdote that follows will demonstrate. A how-to book called *Going to the Cinema* (Buchanan and Reed 1957) was part of a British series from the 1950s that instructs middle-class readers in how to enjoy culture. The book promises "increased powers of perception" that will develop spectators' pleasure to make them more discriminating (Buchanan and Reed 1957, 13). A list of "films everyone should see" is included (Buchanan and Reed 1957, 155-57). This reiterates ongoing concerns of film theory, from the silent era's

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Universal Capture – Image-based Facial Animation for "The Matrix Reloaded"

George Borshukov, Dan Piponi, Oystein Larsen, J.P.Lewis, Christina Tempelaar-Lietz
ESC Entertainment

Introduction

The VFX R&D stage for *The Matrix Reloaded* was kicked off in January 2000 with the challenge to create realistic human faces. We believed that traditional facial animation approaches like muscle deformers or blend shapes would simply never work, both because of the richness of facial movement and because of the human viewer's extreme sensitivity to facial nuances. Our task was further complicated as we had to recreate familiar actors such as Keanu Reeves and Lawrence Fishburne. Our team had been very successful at applying image-based techniques for photorealistic film set/location rendering, so we decided to approach the problem from the image-based side again. We wanted to produce a 3-d recording of the real actor's performance and be able to play it back from different angles and under different lighting conditions. Just as we can extract geometry, texture, or light from images, we are now able to extract movement. Universal Capture combines two powerful computer vision techniques: optical flow and photogrammetry.

HiDef Capture Setup

We used a carefully placed array of five synchronized cameras that captured the actor's performance in ambient lighting. For the best image quality we deployed a sophisticated arrangement of Sony/Panavision HDW-F900 cameras and computer workstations that captured the images in uncompressed digital format straight to hard disks at data rates close to 1G/sec.

Optical Flow + Photogrammetry

We use optical flow to track each pixel's motion over time in each camera view. The result of this process is then combined with a cyberscan model of a neutral expression of the actor and with photogrammetric reconstruction of the camera positions. The algorithm works by projecting a vertex of the model into each of the cameras and then tracking the motion of that vertex in 2-d using the optical flow where at each frame the 3-d position is estimated using triangulation. The result is an accurate reconstruction of the path of each vertex though 3-d space over time.

Keyshaping, Adapt, Removing Global Motion

Optical flow errors can accumulate over time, causing an undesirable drift in the 3-d reconstruction. To minimize the drift we make use of reverse optical flow. On this production the problem was eliminated by introducing a manual keyshaping step: when the flow error becomes unacceptably large the geometry is manually corrected and the correction is then algorithmically propagated to previous frames.

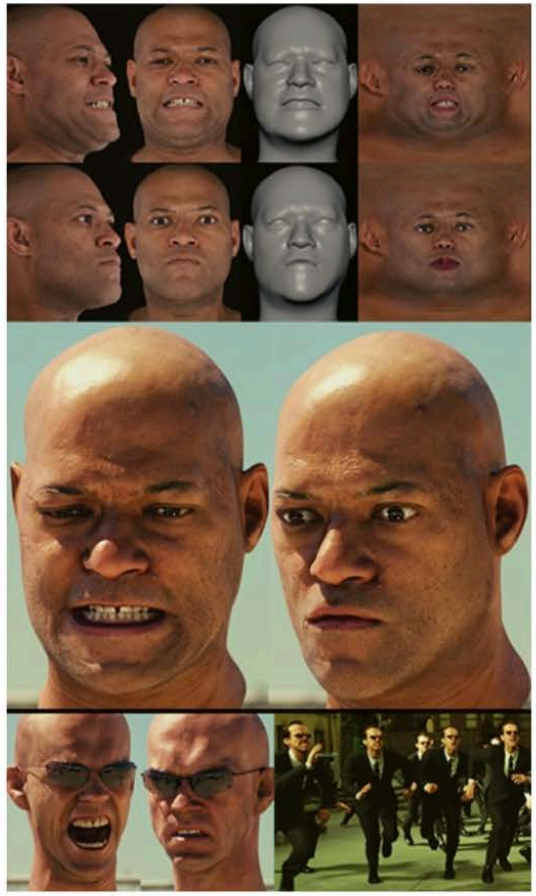
The reconstructed motion contains the global "rigid" head movement. In order to attach facial performances to CG bodies or blend between different performances this movement must be removed. We estimate the rigid transformation using a least squares fit of a neutral face and then subtract this motion to obtain the non-rigid deformation.

Texture Map Extraction

No believable facial rendering can be done without varying the face texture over time. The fact that we did not use any markers on the face to assist feature tracking gave us the important advantage that we could combine the images from the multiple camera views over time to produce animated seamless UV color maps capturing important textural variation across the face, such as the forming of fine wrinkles or changes in color due to strain, in high-res detail on each side of the face.

Rendering

Although the extracted facial animation had most of the motion nuances it lacked the small-scale surface detail like pores and wrinkles. We obtained that by using a highly detailed 100-micron scan of the actor's face. The detail is then extracted in a bump (displacement) map. Dynamic wrinkles were identified by image processing on the texture maps; these are then isolated and layered over the static bump map. We then combine these with image-based skin BRDF estimation, subsurface scattering approximation, and real-world lighting reconstruction for the highly photorealistic human face renderings below.



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Is there a universal image generator?

Cristian S. Calude [a,*], J.P. Lewis [b]

[a] Department of Computer Science, The University of Auckland, Private Bag 92019, Auckland, New Zealand
[b] Weta Digital and Massey University, Wellington, New Zealand

ARTICLE INFO

Keywords:
Image generation algorithm
Algorithmic complexity
Natural image

ABSTRACT

Synthetic pattern generation procedures have various applications, and a number of approaches (fractals, L-systems, etc.) have been devised. A fundamental underlying question is: will new pattern generation algorithms continue to be invented, or is there some "universal" algorithm that can generate all (and only) the perceptually distinguishable images, or even all members of a restricted class of patterns such as logos or letterforms? In fact there are many complete algorithms that can generate all possible images, but most images are random and not perceptually distinguishable. Counting arguments show that the percentage of distinguishable images that will be generated by such complete algorithms is vanishingly small. In this paper we observe that perceptually distinguishable images are compressible. Using this observation it is evident that algorithmic complexity provides an appropriate framework for discussing the question of a universal image generator. We propose a natural thesis for describing perceptually distinguishable images and argue its validity. Based on it, we show that there is no program that generates all (and only) these images. Although this is an abstract result, it may have importance for graphics and other fields that deal with compressible signals. In essence, new representations and pattern generation algorithms will continue to be developed; there is no feasible "super algorithm" that is capable of all things.

1. Introduction

Is there a universal image construction, meaning a single algorithm that can generate all (and only) the possible perceptually distinguishable images? In an essay in *Metamagical Themas* [10] Hofstadter considered a similar but simpler question: is there an algorithm that can generate all possible letterforms. As it seems trivially possible to create any desired letterform with a spline drawing program such as Adobe Illustrator, the question needs to be explained. A universal generation algorithm for a class of images is an algorithm that can generate all members of that class and that never (or only very rarely) generates objects outside that class. In the case of Hofstadter's essay one imagines a master typeface program that will generate all possible letterforms as user-specified style parameters are varied, or that generates all possible letterforms automatically with no user input. The program's outputs should be predominantly images of the intended class—a small percentage of non-letterform patterns among the outputs of a letterform generator might be acceptable for some purposes, but a letterform generator that only rarely produces letterforms hardly justifies the name.

We adopt Hofstadter's terminology in describing the problem. Making an analogy to Gödel Incompleteness in mathematics, Hofstadter terms a letter forming algorithm *complete* if it can generate all possible letterforms, and *consistent* if it generates only letterforms and no other types of images. In these terms we define a *universal* algorithm to be one that is both consistent and complete. Hofstadter suggests that a universal (complete and consistent) letterform algorithm does not exist.

* Corresponding author.
E-mail addresses: cristian@cs.auckland.ac.nz (C.S. Calude), noisebrain@gmail.com (J.P. Lewis).

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FORUM

The innovation engines: science, entertainment and convergence in New Zealand's research future

L Gurevitch*

The School of Design, Victoria University of Wellington, Wellington, New Zealand

(*Received 30 January 2015; accepted 10 February 2015*)

This opinion piece considers the relationship between computer science, industrial innovation and New Zealand's research future, taking as its basis the case of Weta Digital and its continual development of computer-automated tools that replace cognitive labour. This process of computer automation offers a glimpse of the potential direction in which industrial and research production may move over the coming decades.

Keywords: computation; computer science; film; future; industry; innovation; new media; New Zealand; research; sociology

In 1821, at a time when the word 'computer' still referred to a human profession, Charles Babbage famously proclaimed, while reading through a fault-ridden table of logarithms, that he wished the calculations had been performed by steam rather than computer. Babbage went on to design and construct some of the first mechanical computers (initially the 'difference engine' and later the 'analytical engine'). Although Babbage ultimately failed to see either of his engines fully realised, interest in his work resurfaced in the twentieth century when key figures in the development of digital computing began to redress concepts first put forward by him. In a paper in 1936, Alan Turing christened his first theoretical exposition of a computer the 'automatic computing engine'. Turing's reference to the computer as an 'engine' was likely made in homage to Babbage and was subsequently taken up by a generation of computer hardware and software engineers.

Turing was, however, just one in a long line of computer scientists who premised their approach towards computing upon an interesting and telling analogy that extended from Babbage's initial desire to replace human 'computers' with steam. Turing conceptualised and referred to the computer and its workings explicitly as a 'mind' (Turing 1936, p. 250). Less than a year later, in his own work on the computer in Nazi Germany, 27-year-old mechanical engineer Konrad Zuse drew a similar analogy in his diary: 'for about a year now I have been considering the concept of a mechanical brain' (Zuse 1962). At the conclusion of the Second World War in 1945, Vannevar Bush (1945) wrote a famous piece 'As we may think' in *Atlantic Monthly,* now held to be an early outline concept of the hyperlink. For Bush, who referenced Babbage in the article, the job of computer technology necessarily involved the augmentation and enhancement of human intellect. In the 1950s, as computer research began to broaden its domain, John von Neumann wrote a paper for Yale's Silliman Lecture Series entitled 'The computer and the brain' (von Neumann 1958). In it, von Neumann mused on both computer science and neurological research, considering the nature of calculation and questioning why computer processes should be

*Email: leon.gurevitch@vuw.ac.nz; leonthegurevitch@gmail.com

Primary Premises of DWW Project

+ Post-celluloid, digital effects increasingly function not only as one-time components of a movie but as asset libraries and source code development projects for future features, advertisements and games.

+ At present these audio-visual industries are treated by much academic research as separate and distinct entities while the professionals, skills and tech R&D that underpin them overlap.

+ As games and advertisements become more sophisticated, growing numbers of digital image industries professionals are coming from, and going to, their partner industries.

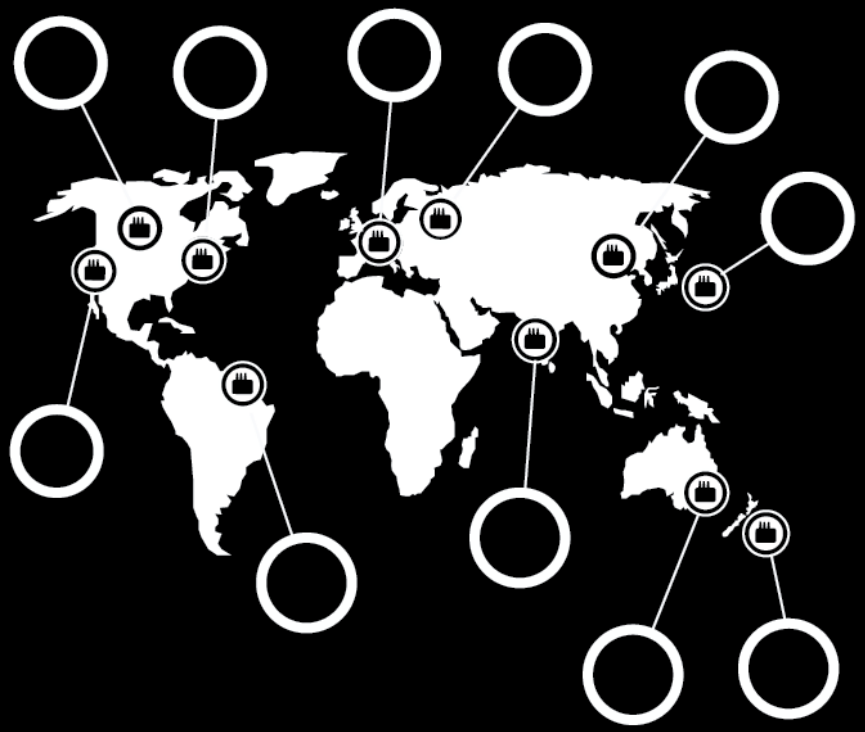
+ While audio-visual industries of the past have long been subject to labour mobility, the skills, software and source code that constitute emergent digital industries form a new thread stitching previously distinct industries together.

+ Software

+ Source Code

+ Skills

Primary Questions



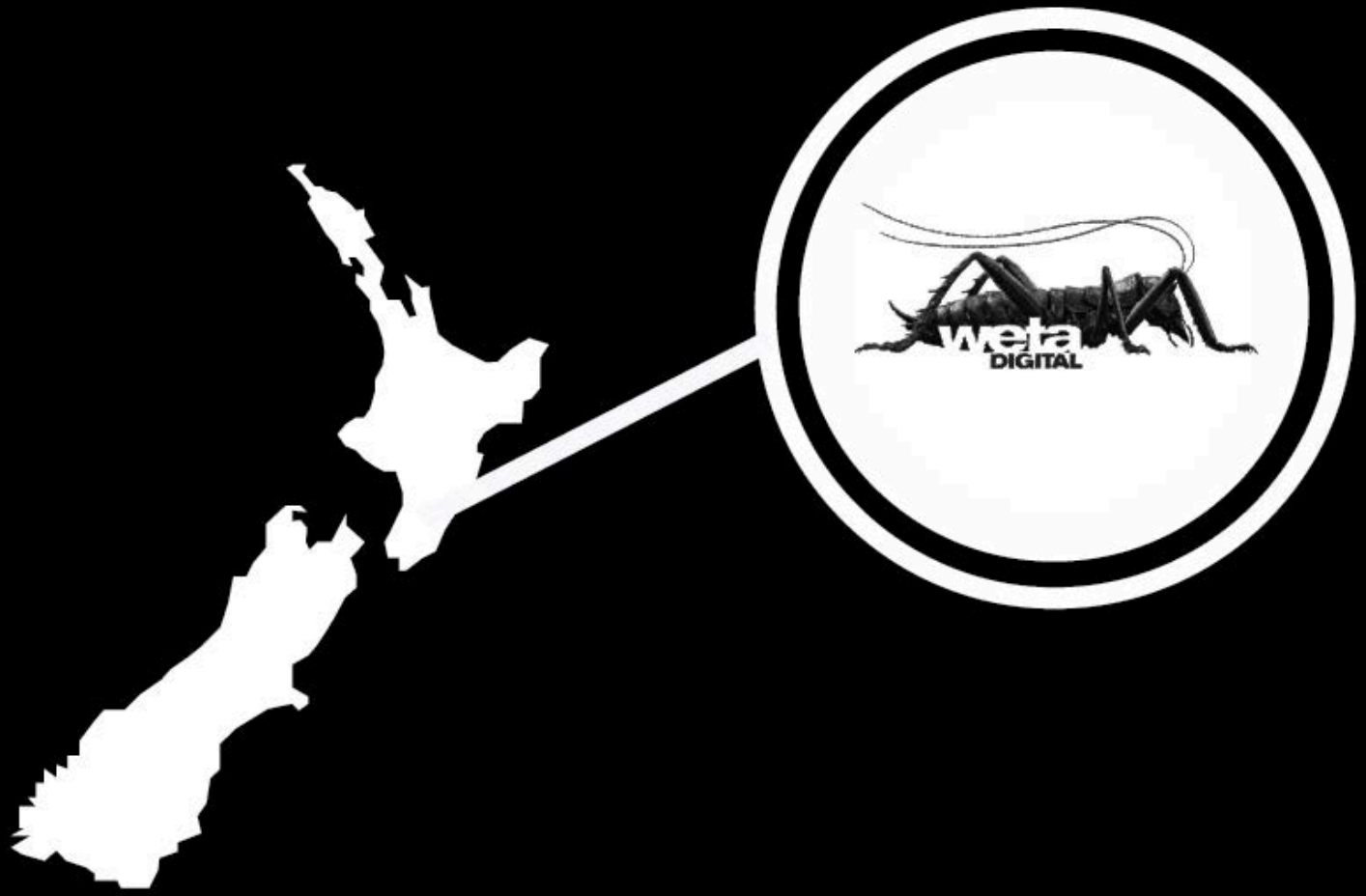
+ To what extent are visual effects skills transferable between movies, advertisements and games production?

+ How much industrial migration is taking place and can we see patterns?

+ How much geographic migration is taking place and can we see patterns?

+ What role does code and coding play in the visual effects economy?

+ How do digital attractions function as promotional vehicles for their production companies and the cognative labourers who create them?



+ What does this mean for New Zealand?

TRANSFORMING NEW ZEALAND'S CULTURE & ECONOMY

PAUL CALLAGHAN

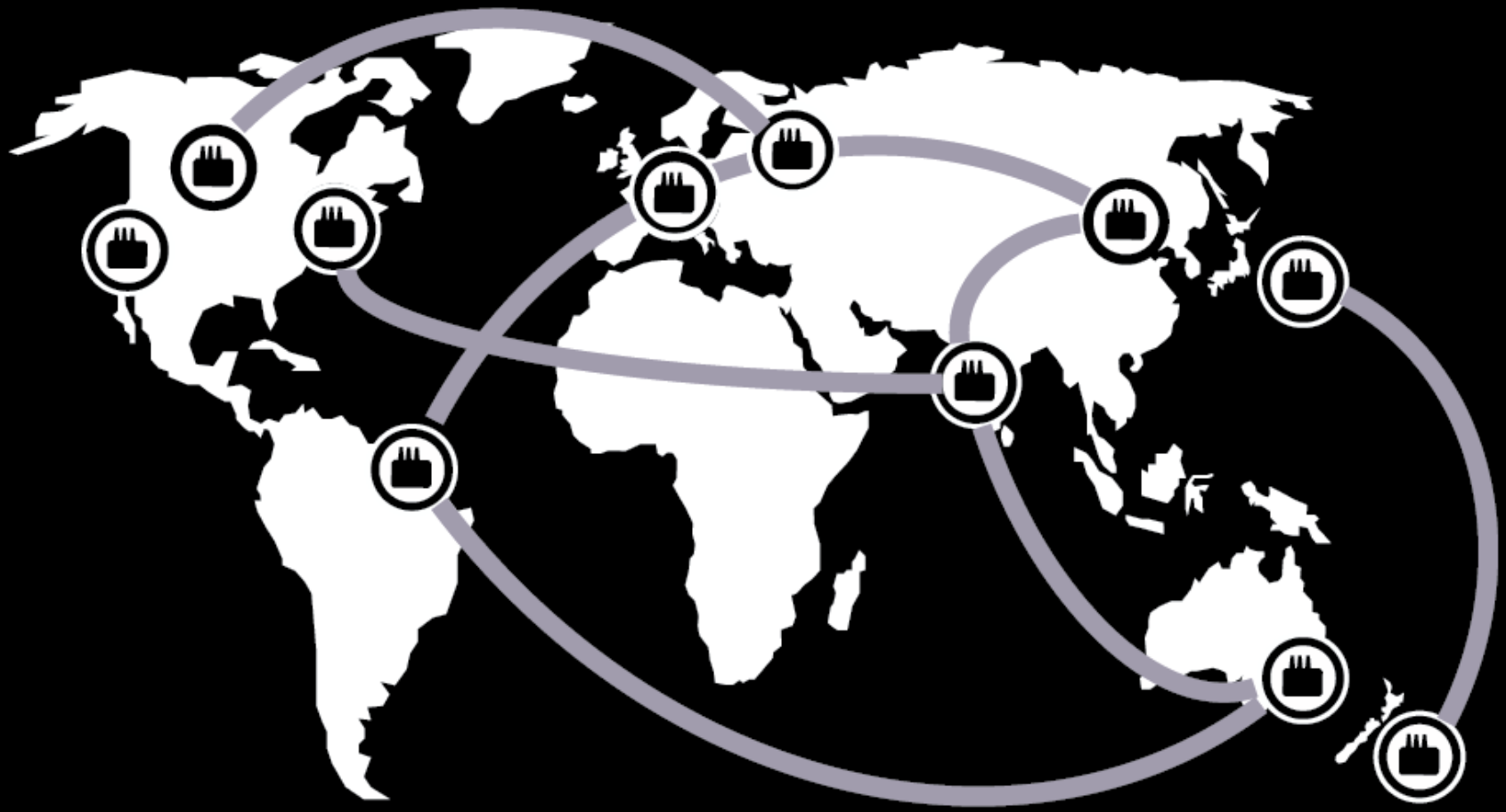
FROM

WETA DIGITAL

THE VISUAL EFFECTS COMPANY FOR

AVATAR

Data visualisation of migration patterns



TD LE ZHANG

Visual Effects Coordinators MONA MOHR • TRINA RENEE

MARLIES SCHACHERL • ADRIA

YINAI SUN • SHANSHAN XIE

YUNRONG YU • MOMO ZHAN

ffects Global Production Manager NATASHA OZOUX

sual Effects Executive Producers THILO KUTHER • CHRISTIAN VO

ects/Titles/Digital Intermediate by KELVIN OPTICAL, INC.

Visual Effects Supervisor ADAM GERSTEL

Digital Intermediate Supervisor JUAN IGNACIO CABRERA

Main Title Design by ANDREW KRAMER

IMDbPY

DOWNLOADS SUPPORT DEVELOPMENT ECOSYSTEM

IMDbPY is a Python package useful to retrieve and manage the data of the IMDb movie database about movies, people, characters and companies.

Download IMDbPY 5.0

Documentation

- Written in pure Python (and few C lines).
- Platform-independent.
- Can retrieve data from both the IMDb's web server and a local copy of the whole database.
- Released under the terms of the GPL 2 license.
- A simple API.
- IMDbPY is used by many other projects. Curious about that?

Number of ‘Jumps’

Count of person	Column Labels																	
Row Labels	Animation	Camera	Code	Color	Compositing	Creatures/Ri	CTO	Effects	Environment	Layout	Lighting	Massive	Matte Painti	Mo-Cap	Modeling	Pipeline Syst	Pre-Vis	Production	R&D
Animal Logic					10	2		1			3			1	1	1			
Asylum		3			2			1											
CA Scanline Production								2							1				
CafeFX	1				4			1											
Cinesite	3	3			15			6		1	4	1							
Digital Domain	4		3		20	3	1	9			4		2		1				
Double Negative	7	3			29			9			6				2		1		
Dream Quest Images					2						1		1					1	
Framestore	2				5	1		5	1		2	2	1	2					
Framestore CFC	3				5	3		1			5				4	1			
Fuel VFX		1			8			1			1								
Giant Killer Robots					1			4											
Hydraulx					2			1			1								
Image Engine Design					5						3				2		1		
Industrial Light & Magic (ILM)	7	2		1	22	4		16		1	3		5			2		1	2
Luma Pictures	1	1			1			1			1				2				
Method Studios					4														
Mill Film	1				6			1											
Moving Picture Company								1											
MPC	3				29			9	2	4	10		1	2	4			2	1
Peerless Camera Company	4				2			1											
Pixomondo		2			6			3					1						
Rainmaker	1																		
Rhythm & Hues	14	6			8	1		3			15		3		4			1	
Rising Sun Pictures	3	3			17			8			2		2		1		1		1
Rodeo FX								1					1						
ScanlineVFX		1			1			1											
Sony Pictures Imageworks (SPI)											1								
SPI	2				7	2		3			4					1			
The Orphanage					2	1					1		2		1				
Tippett Studio	3				6	8		1			3				1	1			
Grand Total	59	25	3	1	219	25	1	90	3	6	70	3	19	5	24	6	3	5	4

Roles on the VFX Pipeline

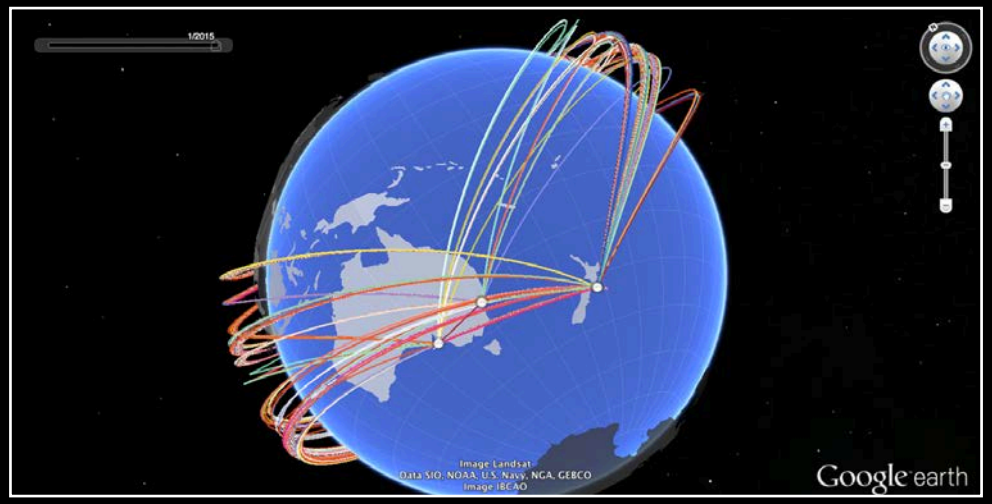
	code department supervisor	8
	code facial set-up	1
	code operations manager	2
	code team	5
	code/camera coordinator	1
	color & lighting technical director	5
	color and lighting	1
	color and lighting technical director	9
	color grader	2
	color timer	6
	color timing supervisor	8
	colour timer	1
	comp research and development	1
	composite artist	4
	composite designer	2
	composite supervisor	8
	composite/digital effects supervisor	1
	compositing	1
	compositing & lighting TD	1
	compositing and lighting	8
	compositing and roto artist	2
	compositing arist	1
	compositing artist	48
	compositing assistant technical director	3
	compositing coordinator	4
	compositing department	25
	compositing department manager	2
	compositing department production manager	5
	compositing department supervisor	1
	compositing head of department	2
	compositing hod	1
	compositing lead	21
	compositing production manager	4
	compositing sequence lead	11
	compositing sequence manager	1
	compositing sequence supervisor	9
	compositing supervisor	151
	compositing supevisor/cg lighting and effects supervisor	1
	compositing TD	1
	compositing team	34
	compositing technical director	5
	compositing/environment supervisor	1
	compositor	1100
	compositor and lighter	1
	compositor/cg lighting/effects artist/animator	5
	compositor/paint artist	2
	computer animator	16
	computer effects artist	1
	computer graphic artist	6

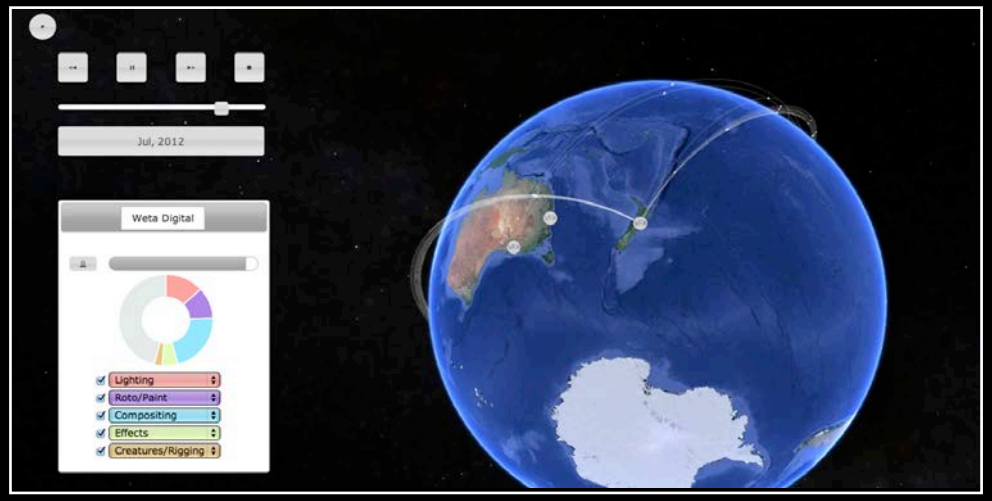
Locations of VFX Houses

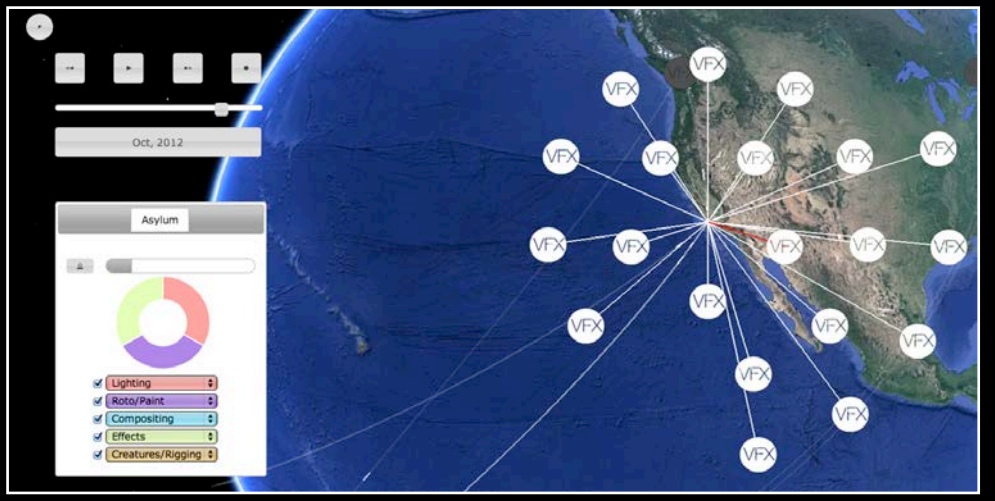
Camera	1.0867E+12	MPC	los angeles	california
Mo-Cap	1.13655E+12	Rhythm & Hues	los angeles	california
Compositing	1.0867E+12	Framestore CFC	london	united kingdom
Effects	1.37156E+12	Framestore	london	united kingdom
Effects	1.12091E+12	Tippett Studio	san francisco	california
Lighting	1.1534E+12	Framestore CFC	london	united kingdom
	1.12506E+12	Digital Domain	los angeles	california
	1.25129E+12	CafeFX	santa maria	california
Animation	1.13655E+12	Rhythm & Hues	los angeles	california
Roto/Paint	1.33596E+12	Industrial Light & Magic (ILM)	san francisco	california
Creatures/Rigging	1.17923E+12	SPI	los angeles	california
Compositing	1.13603E+12	Digital Domain	los angeles	california
Compositing	1.13378E+12	MPC	los angeles	california
	1.24489E+12	Rising Sun Pictures	adelaide	australia
Lighting	1.33233E+12	Double Negative	london	united kingdom
Lighting	1.33233E+12	Cinesite	london	united kingdom
R&D	1.12091E+12	Double Negative	london	united kingdom
Compositing	1.10242E+12	Double Negative	london	united kingdom
Effects	1.15538E+12	Cinesite	london	united kingdom
TD	1.10095E+12	SPI	los angeles	california
Compositing	1.18217E+12	Digital Domain	los angeles	california
Textures	1.36879E+12	Digital Domain	los angeles	california
Effects	1.04202E+12	Industrial Light & Magic (ILM)	san francisco	california
Compositing	1.07356E+12	Industrial Light & Magic (ILM)	san francisco	california
Roto/Paint	1.31453E+12	Industrial Light & Magic (ILM)	san francisco	california
Roto/Paint	1.35134E+12	Moving Picture Company	los angeles	california
TD	1.07356E+12	Industrial Light & Magic (ILM)	san francisco	california
Effects	1.27453E+12	Digital Domain	los angeles	california
Compositing	1.0867E+12	MPC	los angeles	california
	1.21189E+12	CafeFX	santa maria	california
Compositing	1.06984E+12	Tippett Studio	san francisco	california
Compositing	1.08324E+12	Tippett Studio	san francisco	california
Effects	1.17923E+12	SPI	los angeles	california
Compositing	1.1165E+12	Cinesite	london	united kingdom
Compositing	1.15089E+12	Cinesite	london	united kingdom
Compositing	1.37268E+12	Cinesite	london	united kingdom
	1.32559E+12	Framestore	london	united kingdom
Textures	1.11019E+12	CIS Hollywood	los angeles	california
Compositing	1.09767E+12	Rising Sun Pictures	adelaide	australia

Migration Visualisation 1.0

Migration Visualisation 1.0







Designing the Interface

Universal Pictures Logo

Designing the Interface

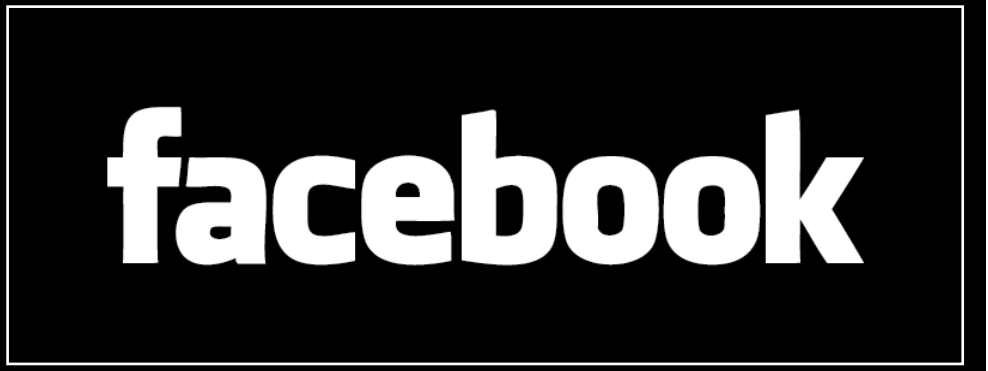
VXF Migration Filter

- ○ Profession
- ○ Employment
- ◉ Movies
- ○ Budgets
- ○ Box Office Take
- ○ Age
- ○ Studio
- ○ Genre
- ○ Awards
- ○ Bankruptcy

The Emerging P2P Economy

Peer-to-peer corresponds to the objective needs of the new craft structure of cognitive labour. Cognitive workers are no longer primarily engaged in long-term factory work but have very flexible career paths, by choice or necessity, which require them to change from being wage labourers to independent freelance consultants to entrepreneurs and back again. Under conditions of chosen or forced flexibility, workers have an objective interest in being networked to gain practical experience, social and reputational capital, and access to networks of exchange and solidarity. Networked peer production is the best avenue to obtain these advantages.

Michael Bauwens



RYAN SLUMAN
JEFF STRUTHERS
CAROLINE TING
CLARE WILLIAMS

RINI SUGIANTO
EDWINA TING
JAMES WILLINGHAM III

SEBASTIAN
LEON WOUD

CLEMENT YIP

ROBERT BLOOM
ANTHONY E. CARTER
MICHAEL CORCORAN
STEVE EVANS
JOSHUA HERRIG
PEG HUNTER
CALEB S. JONES
ALEX KLARICICH
JAKE LEE
JEAN MATTHEWS
MATTHIAS MENZ
DAVID A. OSTLER
SAUL REID
ROGER SHORTT
FREDERIC SOUMAGNAS
BEN THOMPSON
SEAN NOEL WALKER
JOYCE YOUNG

CHRISTINE ARBOIT
DON BRADFORD
JONG JIN CHOI
ALEXIA CUI
JASON FLEMING
ALEXANDER HEWITT
HAI-YEN HUYNH
SANDIP KALSY
PHILIP KORSIKA
JIN LONGHURST
ROBERT K. O. McLEOD
MIKLOS MESTERHAZY
FILIPPO PAGANONI
KURTIS RITANI
ROBERT SHRIDER
RAQI SYED
GEOFF TOBIN
CHRIS WALKER
MOHAND ZENNADI

LESLIE BAKER
NORMAN ALAN BROWN III
GLEN CHRISTIE
TAHIR SAMMY DIAB
JASON GALEON
MATTHEW HICKS
CHANGEUI IM
MIAE KANG
MANFRED KRAEMER
MATTHEW LUMB
TRISTAN McMAHON
JESSICA MILLAR
JOHN PAPAFOTIOU
FRASER ROBERTSON
JAYSON SIMPSON
GAKU TADA
QUAN TRAN
KEVIN WHITFIELD

SHOTS DEPARTMENT

MARK BARBER
ROBERT BYRNE
KELLY ROSLYN CHRISTOPHERS
SAMUEL J. DUNCAN
KENNETH C. GIMPELSON
CALEB HOLLAND
MICHAEL JOHNS
AMBER DAWN KELL
ROBIN KUYPER
DAISUKE MAKI
GREGORY MEERES-YOUNG
MATTHIEU MOLINA
HELEN PAUL
RYAN ROGERS
BRETT SKINNER
VALERIE TAI
WAYNE TRAUDT
JOE WILKIE

KRIS BIBRINGA
BEN CAMPBELL
PETER CONNELLY
KANE ELFERINK
DEEPAK GUPTA
KAREN E. M. HULSE
NATHAN JOHNSON
BALAZS KISS
GENEVIEVE LACOMBE
THOMAS MARTIN
BABAN MEHTA
JANE S. O'CALLAGHAN
DANA PETERS
GAL ROITER
CAMERON SMITH
KIERAN TETHER
DAN WADE
GREGORY N. WILTON

GERARDO AGUILERA
CHRIS EDWARDS
BRIAN GOODWIN
AYAKO KURODA

SIMON BAKER
DANIEL M. ELLIOTT
GRAY D. HORSFIELD
LORENZO LAVATELLI

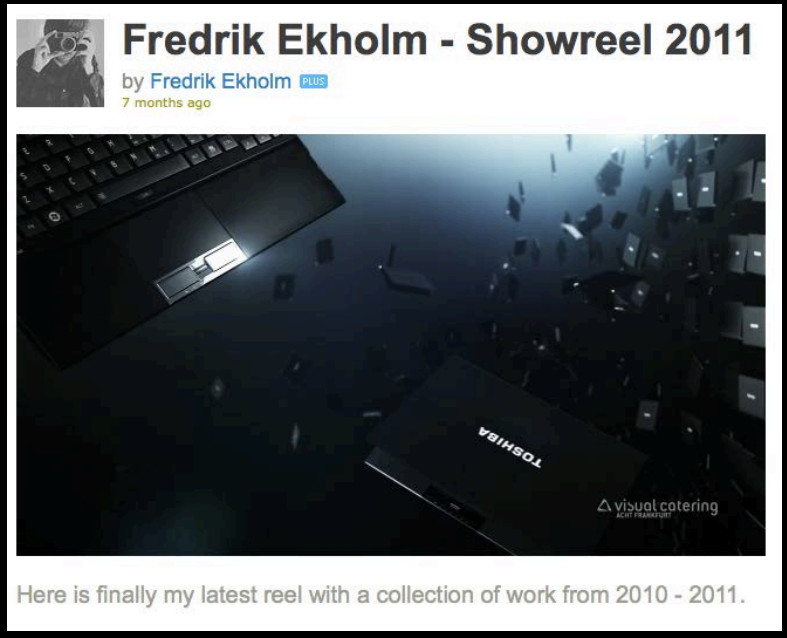
FX DEPARTMENT

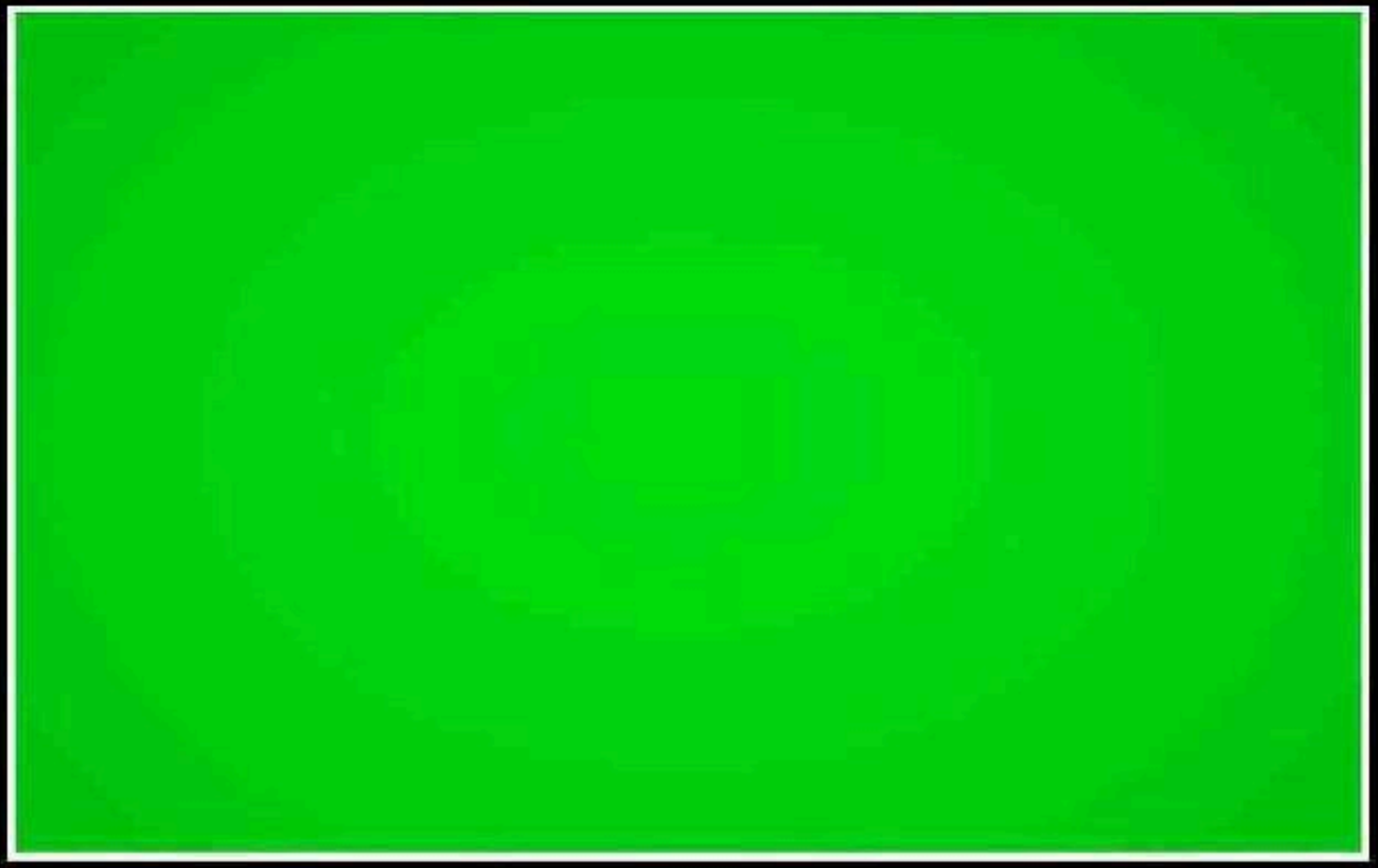
MATHIEU CHARDONNET
SAMANTHA ERICKSTAD
FLORIAN HU
SEAN SEONGKYUN LEE

BRANDON DAVIS
JOHN FARROW
NICHOLAS ILLINGWORTH
BRENDAN NAYLOR

GEORG DUEMLEIN
OLIVER FERGUSON
JOHN JOHANSSON
ANTON OGNYEV

The promotional show reel

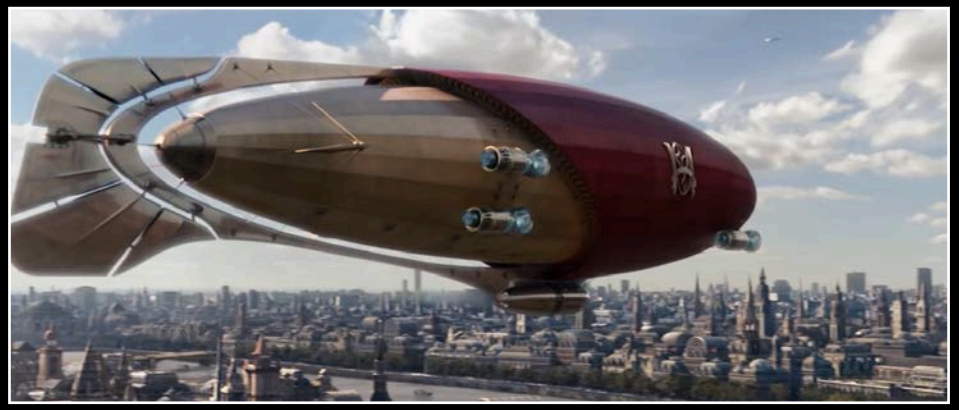




YOUR MOVIE WITHOUT VFX

HOW DO YOU LIKE THEM BILLIONS NOW?

The vfx show reel as promotional attraction

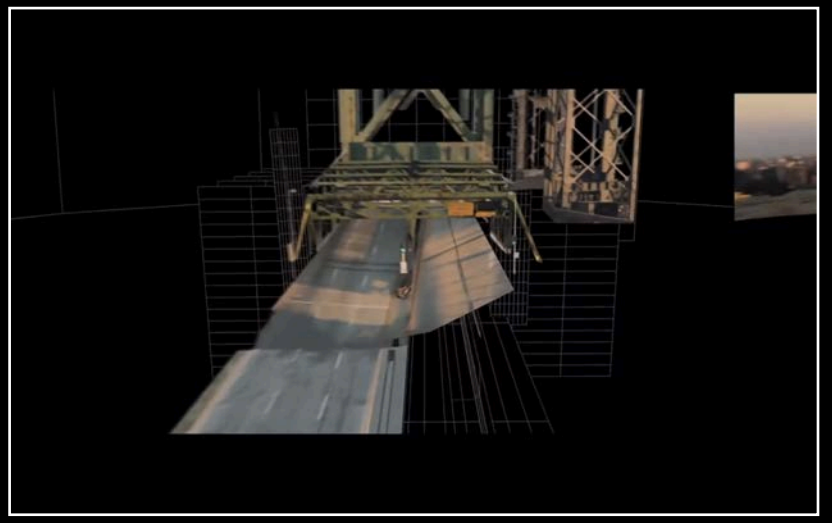


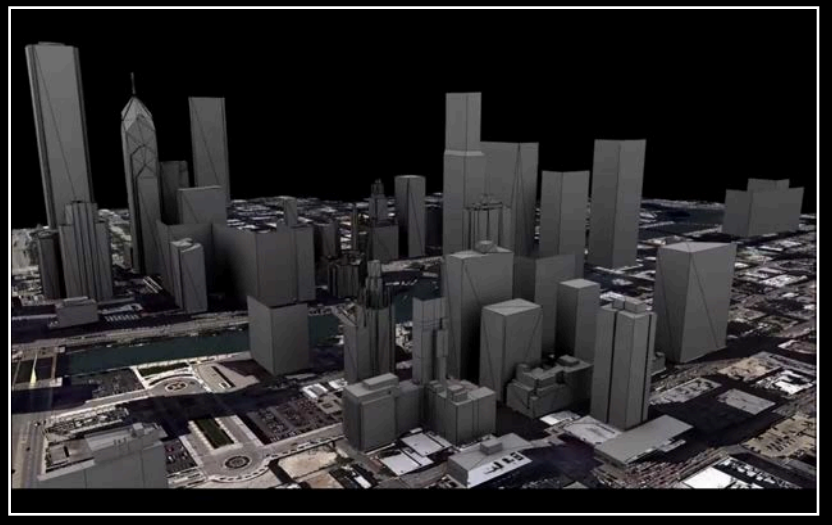
Individual

The vfx show reel as promotional attraction

Software Producer

The vfx show reel as promotional attraction





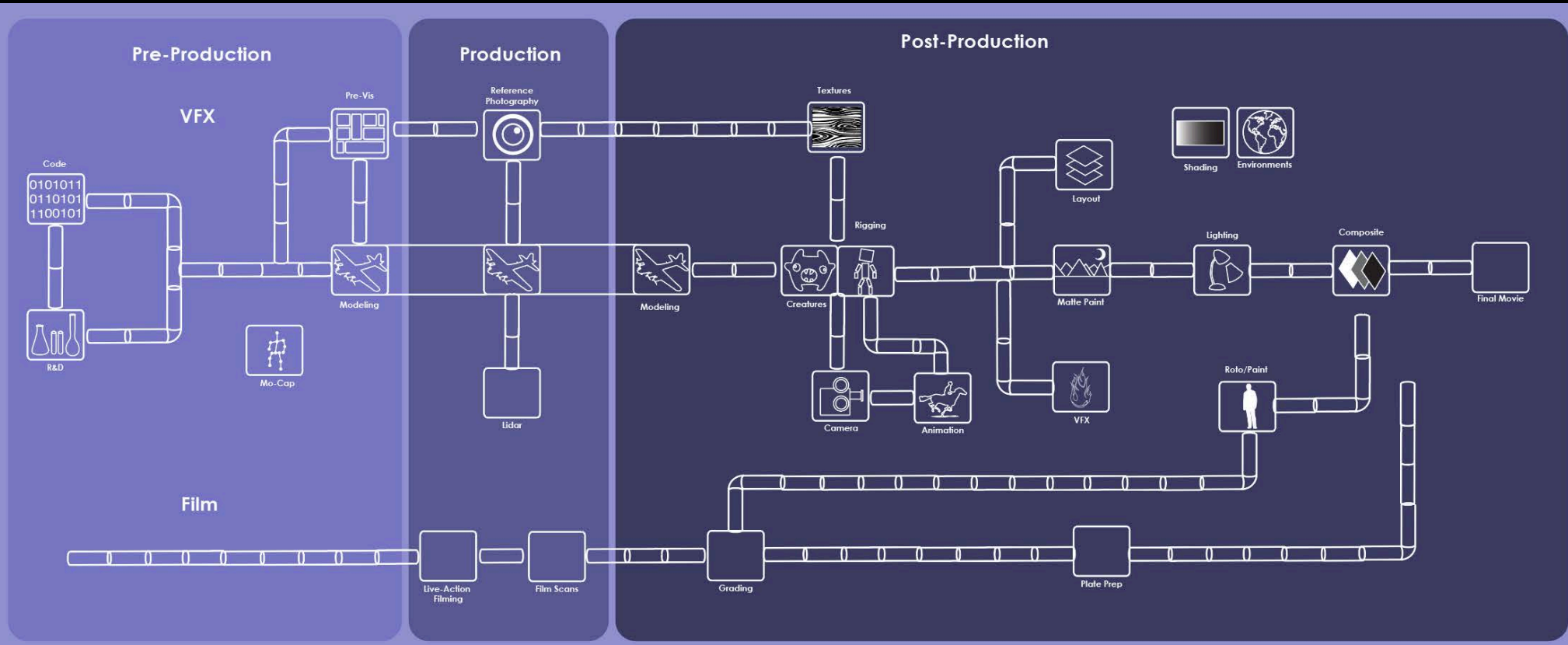
VFX House

In recent months, worldwide dialogue in the visual effects community has created a sense of urgency to address the complex pressures on artists and facilities dealing with issues of frayed business models, financial instability, and an increasingly "nomadic" workforce operating without a secure vision of the future…The Visual Effects Society (VES), the industry's professional honorary society, is committed to using our resources and relationships to support the industry we all love – and to seeking out workable solutions during these especially challenging times.

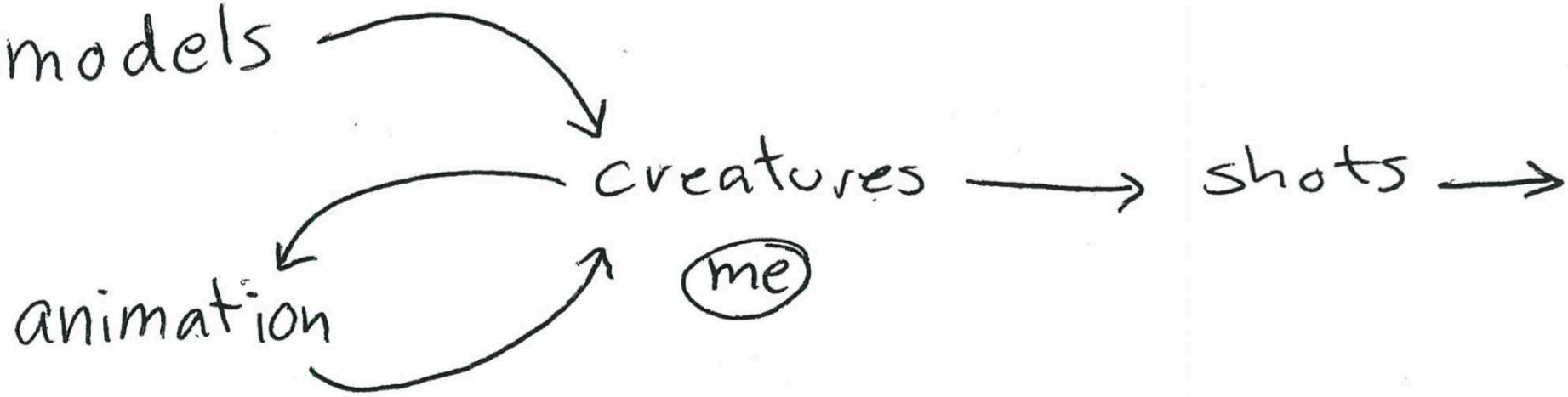
Visual Effects Society Report 2013

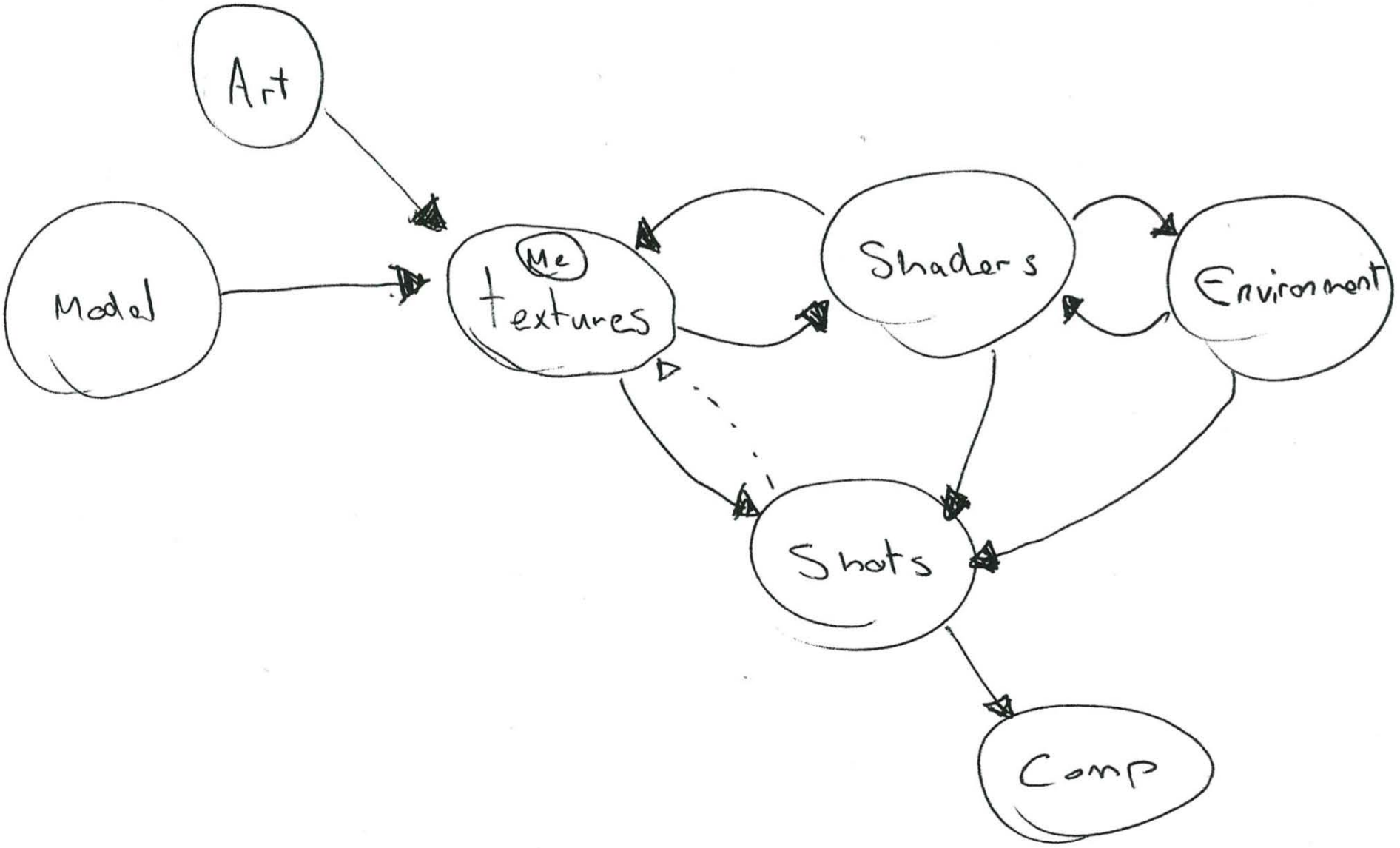
Personally designed GUI as research tool ‘hall pass’

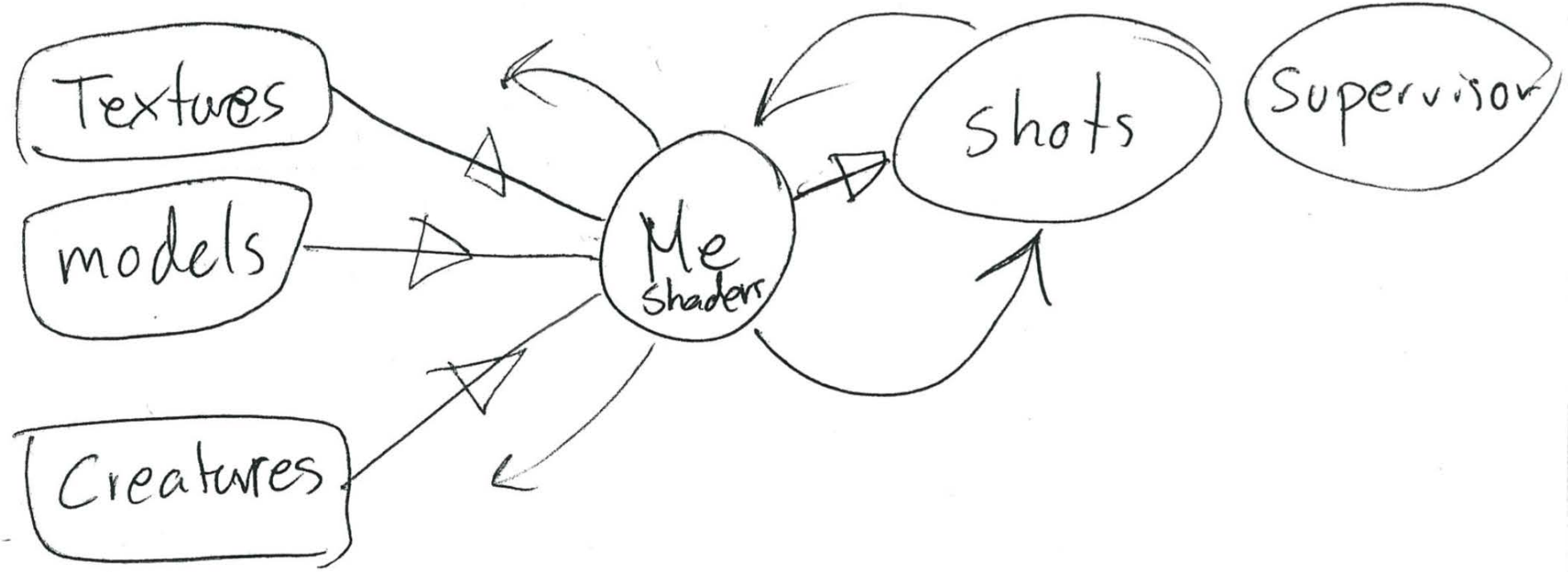
Organic Data Visualisation



The VFX Pipeline


models
creatures
shots
animation
me


Art
Model
Me
textures
Shaders
Environment
Shots
Comp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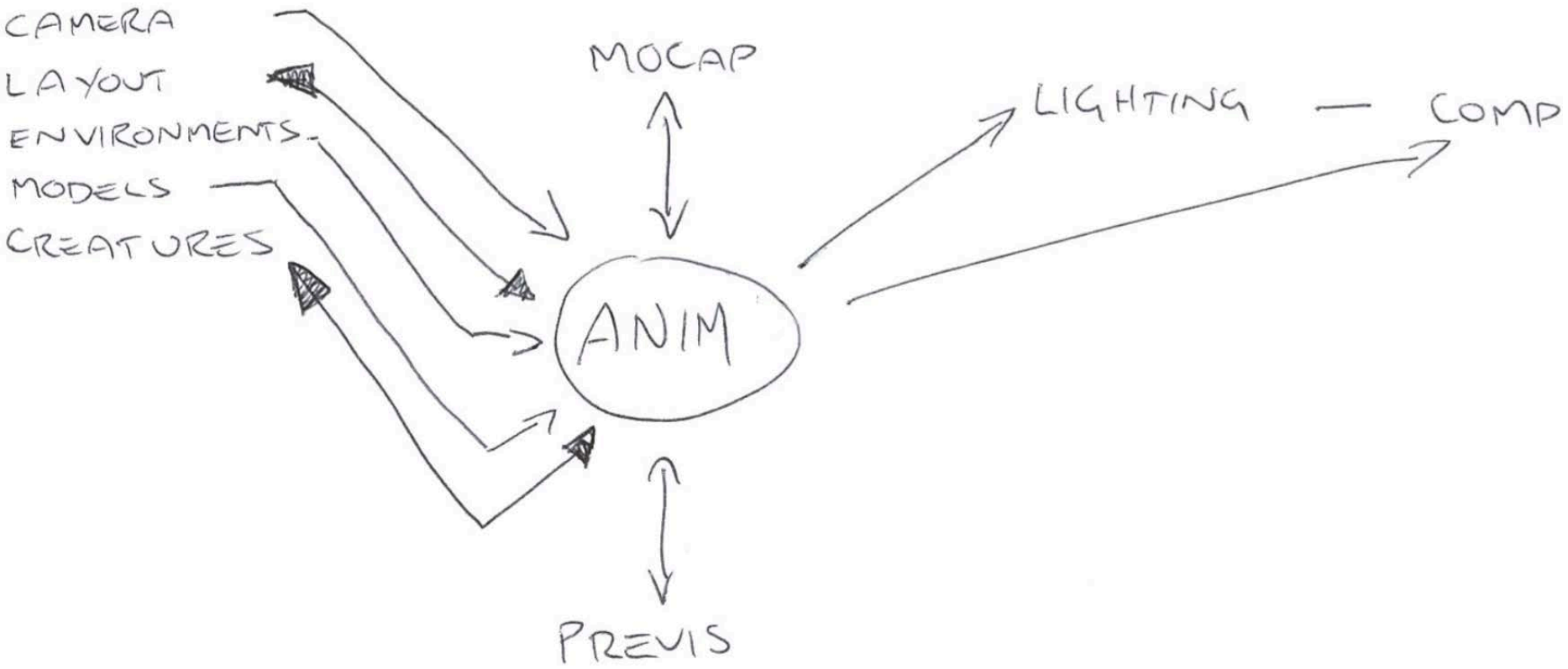
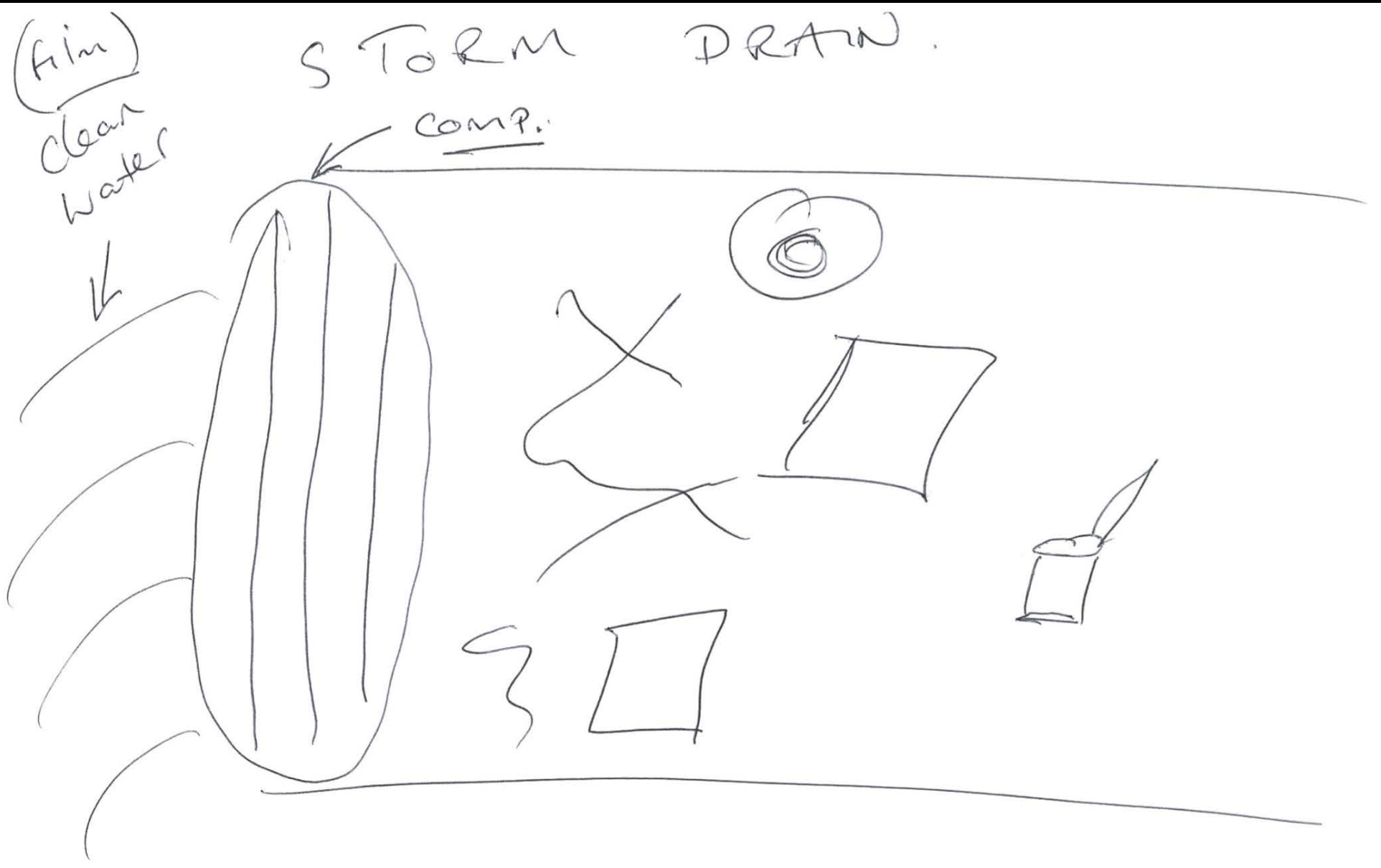
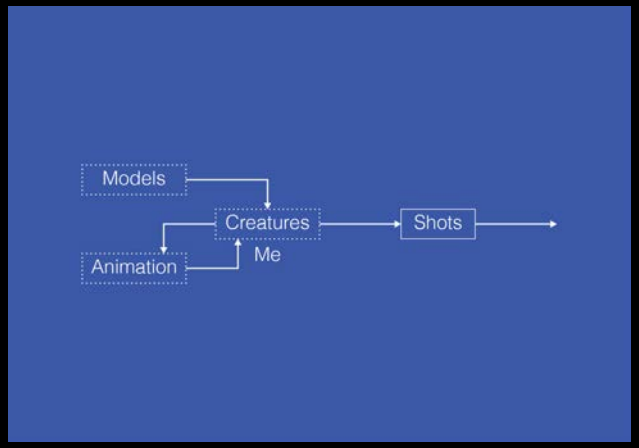
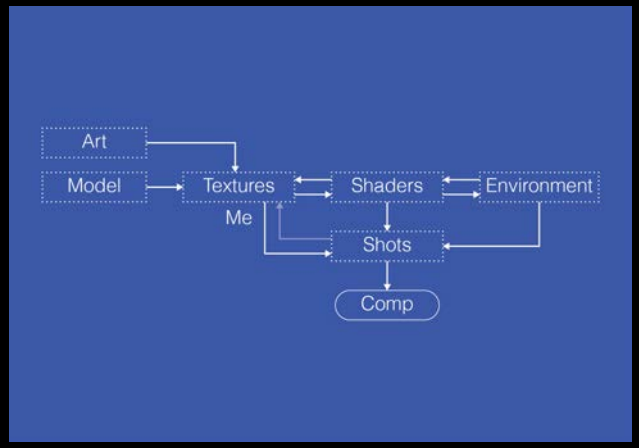
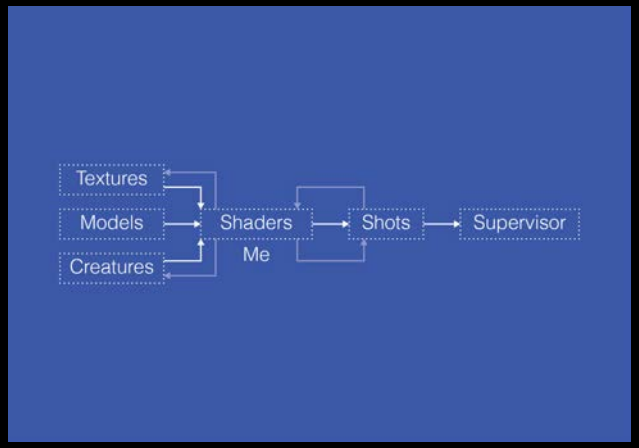
models
Creatures
Me
Shaders
Shots
Supervisor

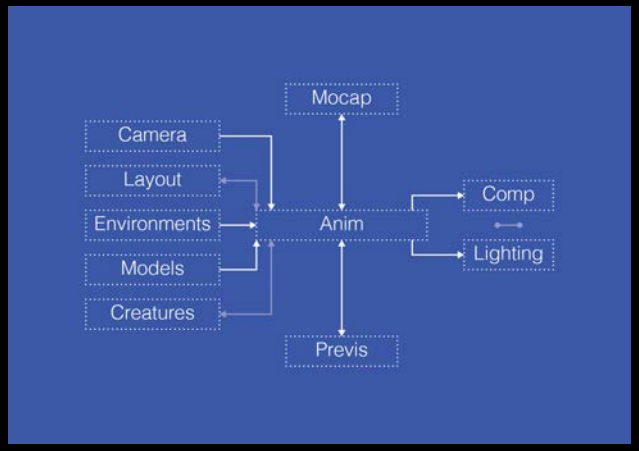

CAMERA
LAYOUT
ENVIRONMENTS
MODELS
CREATURES
MOCAP
ANIM
LIGHTING
COMP
PREVIS

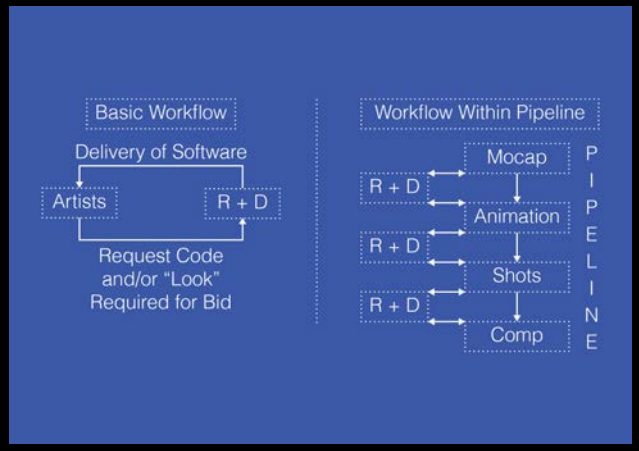

(fin)
clean water
STORM DRAIN.
COMP.

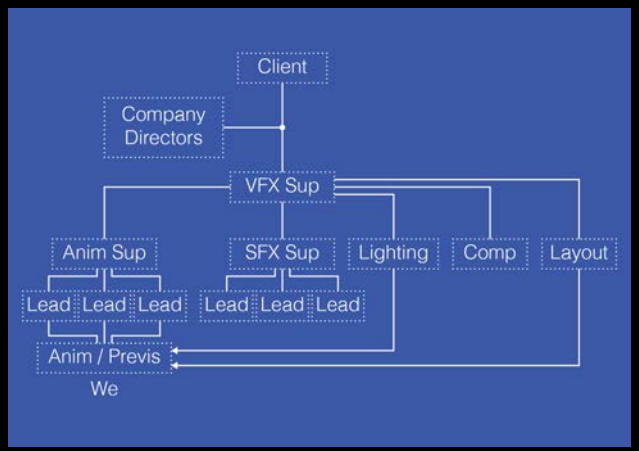

Models
Creatures
Shots
Animation
Me

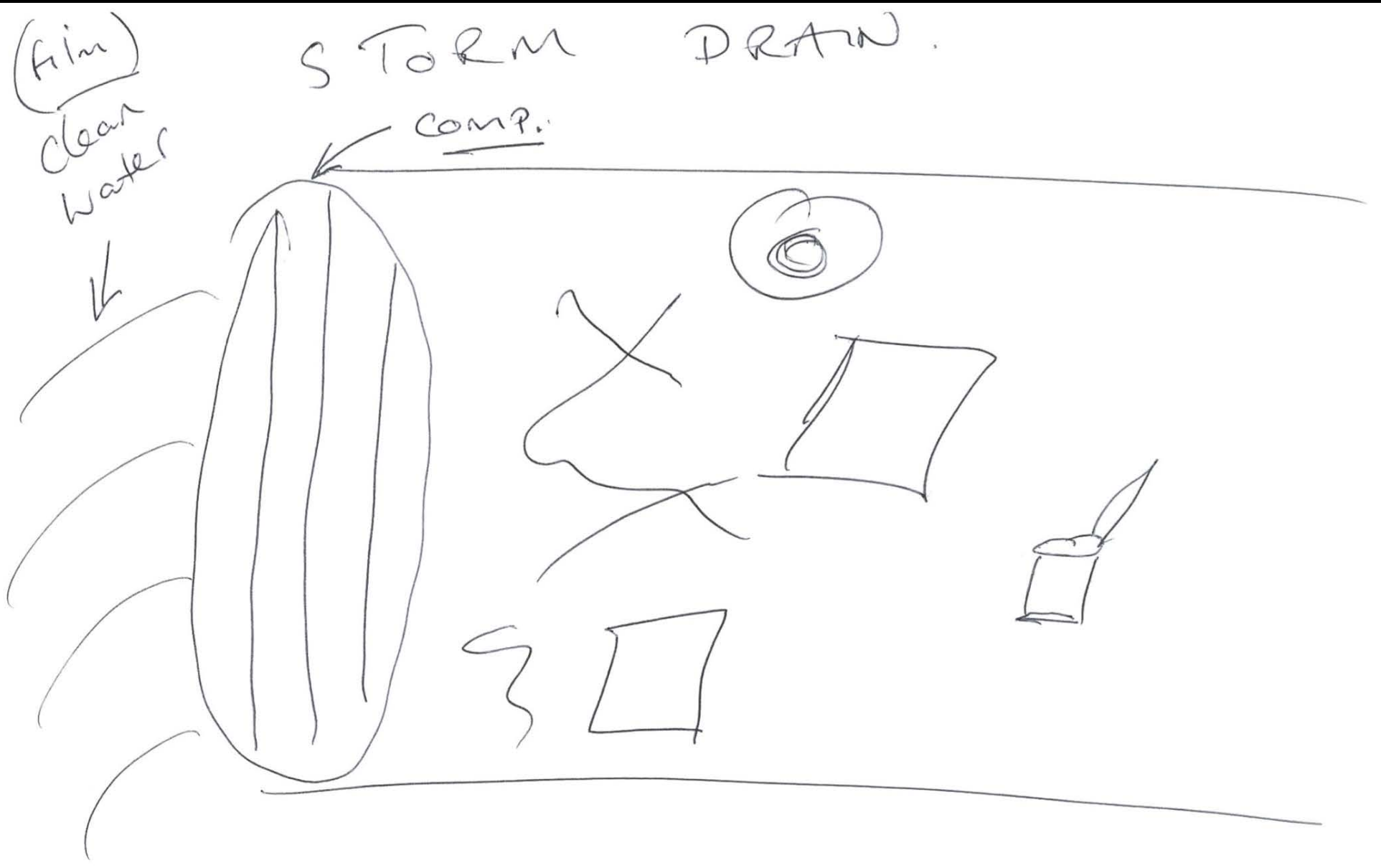

Art
Model
Textures
Shaders
Environment
Me
Shots
Comp


Textures
Models
Creatures
Shaders
Shots
Supervisor
Me


Mocap
Camera
Layout
Environments
Models
Creatures
Anim
Comp
Lighting
Previs


Basic Workflow
Delivery of Software
Artists
R + D
Request Code
and/or "Look"
Required for Bid
Workflow Within Pipeline
Mocap
R + D
Animation
R + D
Shots
R + D
Comp
PIPELINE


Client
Company
Directors
VFX Sup
Anim Sup
SFX Sup
Lighting
Comp
Layout
Lead
Lead
Lead
Lead
Lead
Lead
Anim / Previs
We


(fin)
clean water
STORM DRAIN.
COMP.


Digital Workshops of the World
Digital Workshops of the World