

# Complementary Components of Digital Artworks

Research Visions 2014  
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# Agenda

- Introduction: The rise of Digital Art
- Preliminary Site Information
- Defining a Network
- Notable Components & Clusters
- Defining Component Types
- Exploration by Component Types
- Applications
- Future Work

# The rise of digital art



Many Combinations

Many Possibilities

**the  
creators  
project**



**CREATIVE  
APPLICATIONS  
NETWORK**



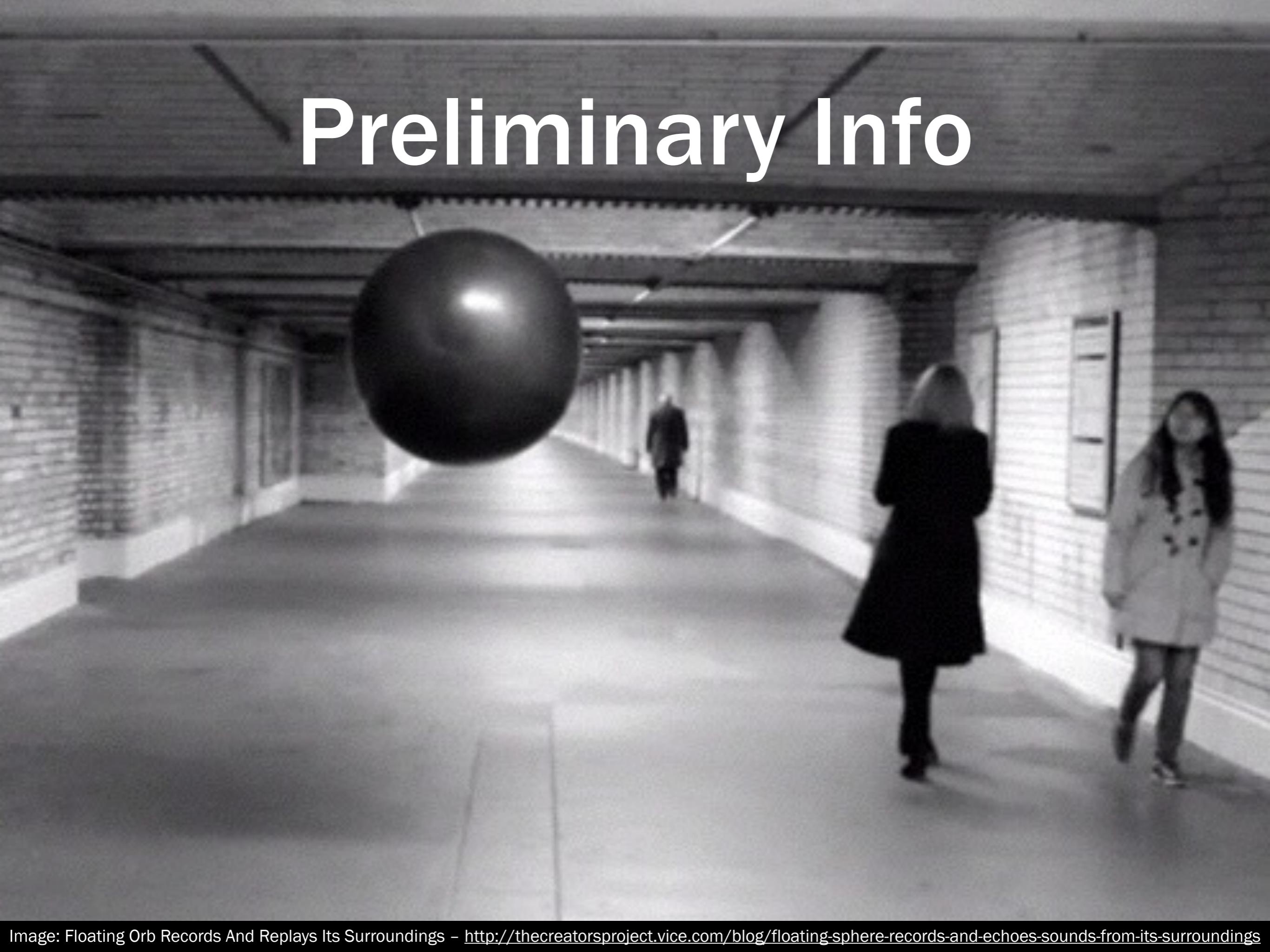
“We seek to inspire new and emerging artists by showcasing the infinite possibilities presented by the advancement of modern technology.”



CREATIVE  
APPLICATIONS  
NETWORK

“The site tirelessly beat reports innovation across the field and catalogues projects, tools and platforms relevant to the intersection of art, media and technology.”

# Preliminary Info





started mid-2010



CREATIVE  
APPLICATIONS  
NETWORK

started mid-2008



Each article contains

Tags

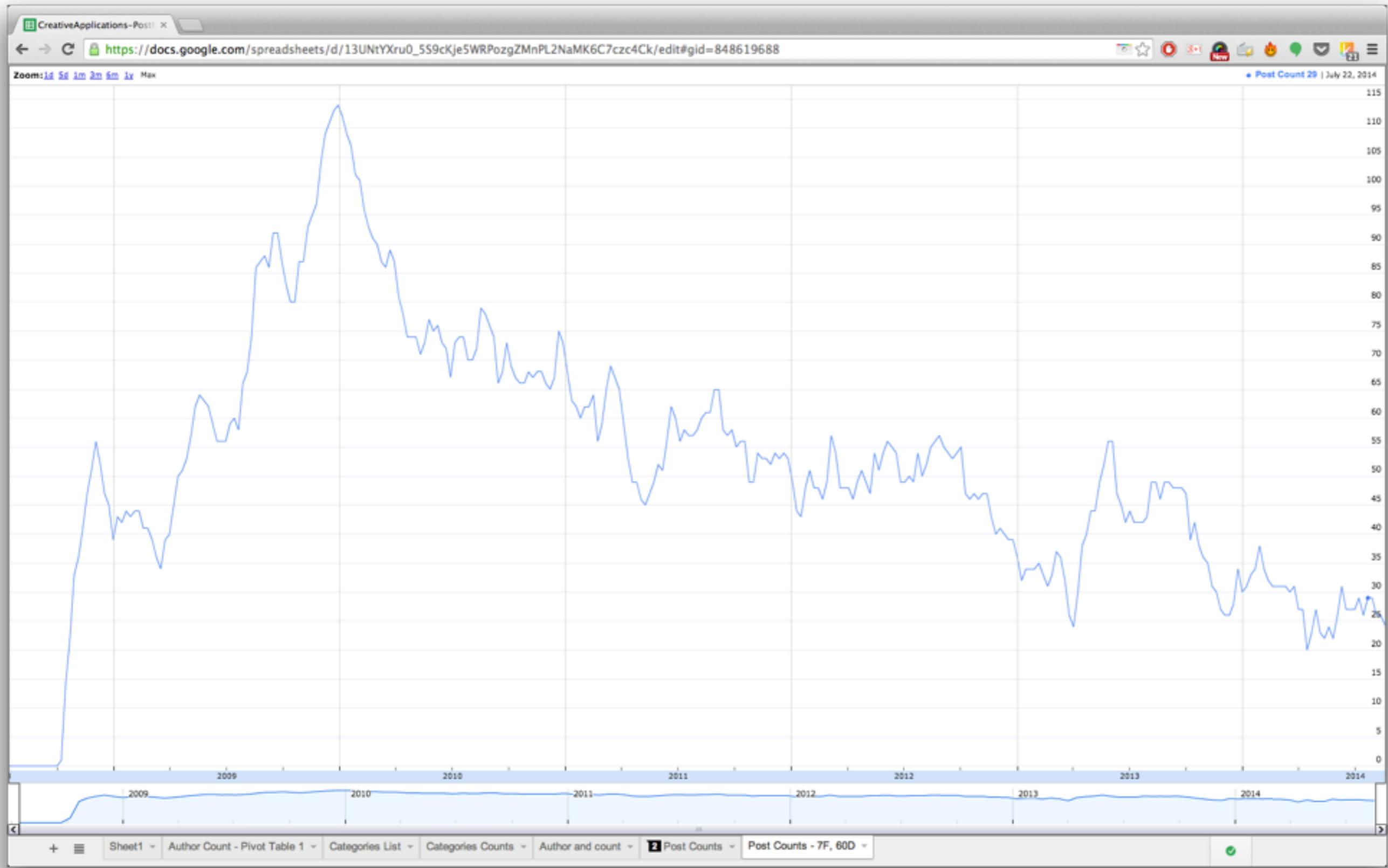


CREATIVE  
APPLICATIONS  
NETWORK

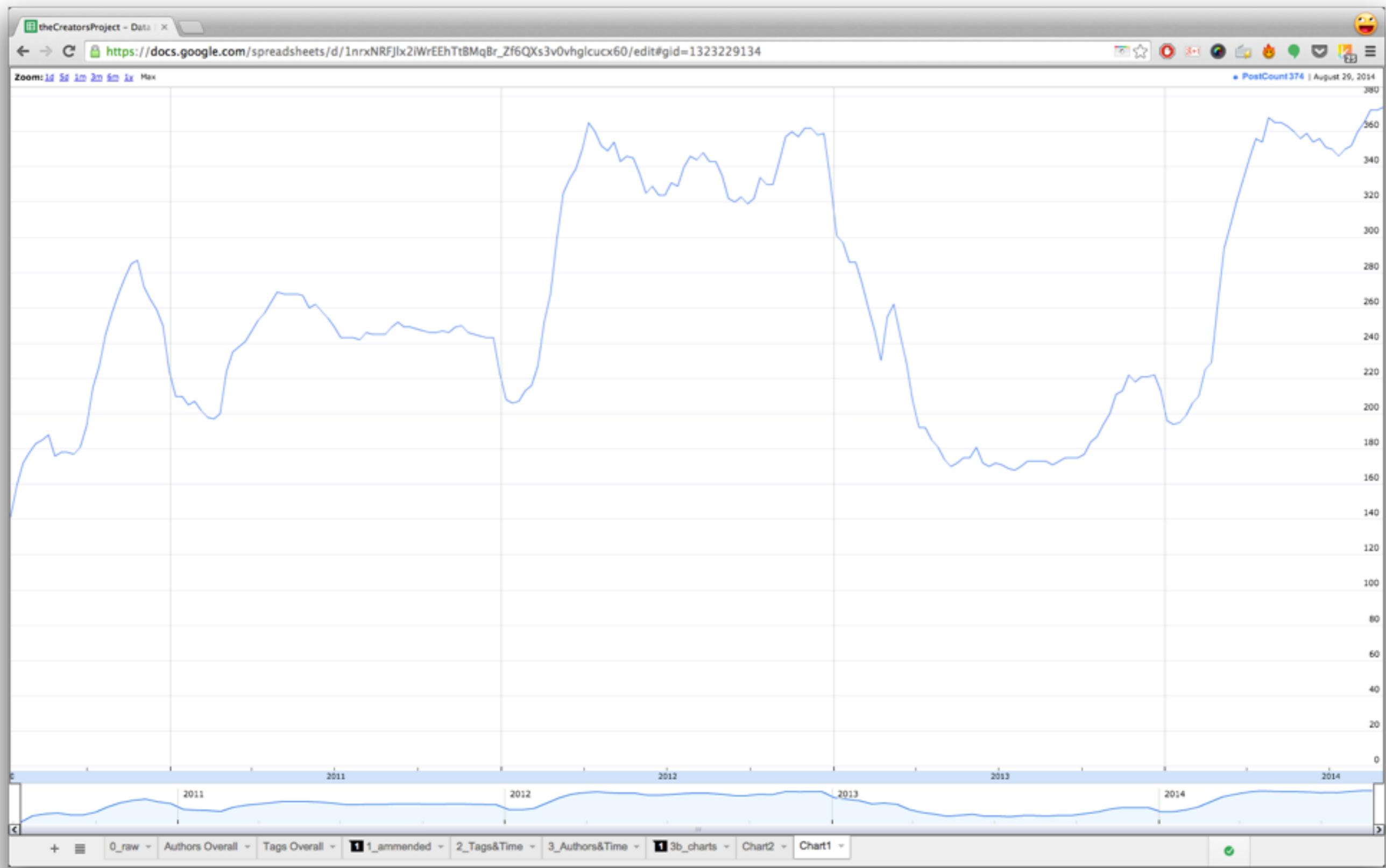
Each article contains

Categories & Tags

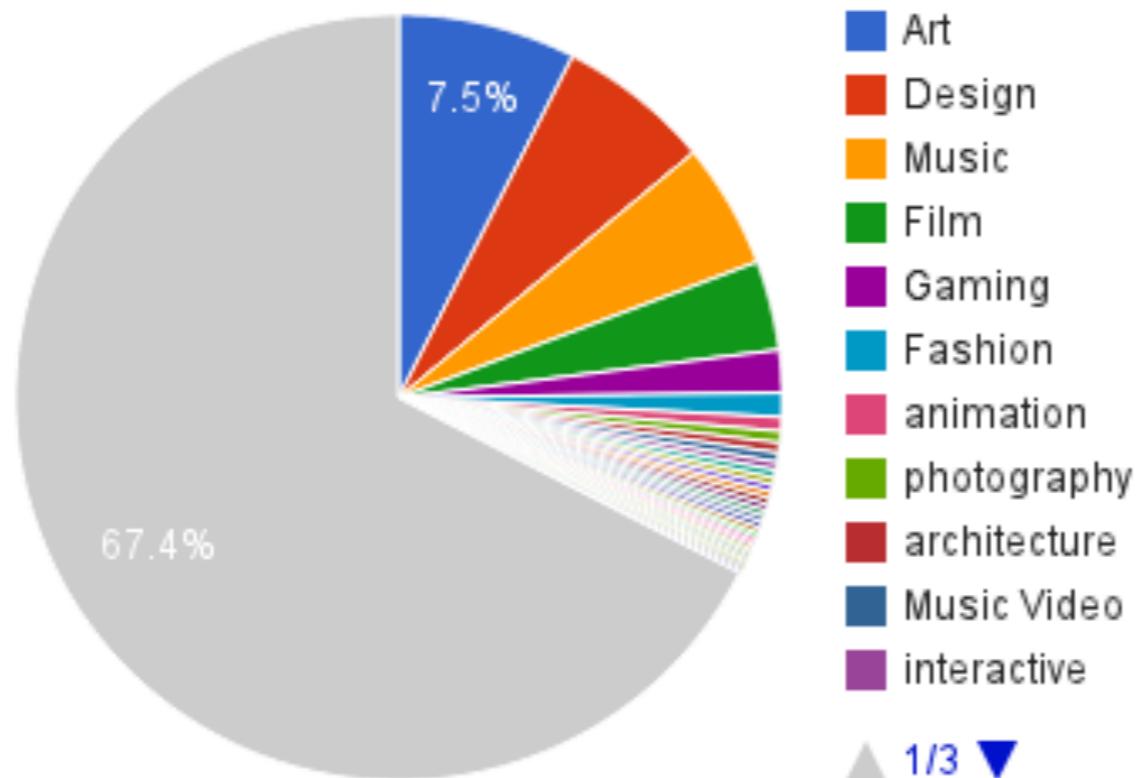
Posts over time



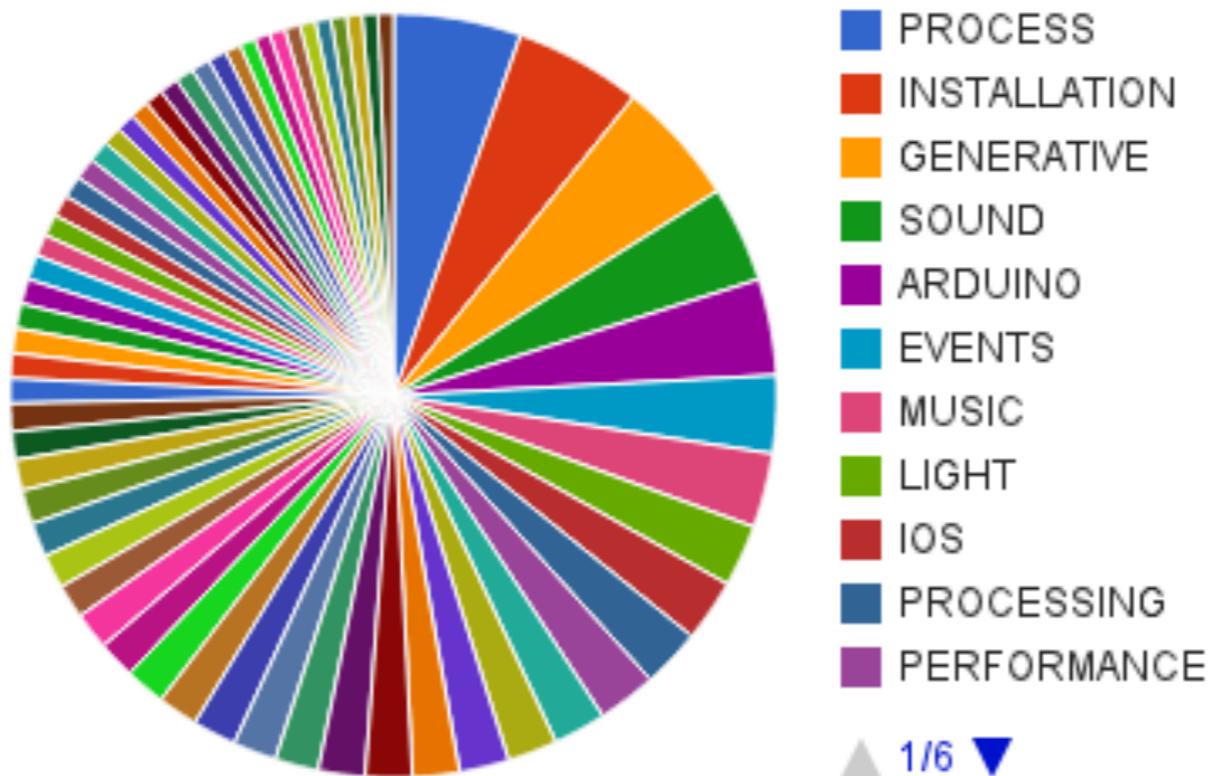
CREATIVE  
APPLICATIONS  
NETWORK



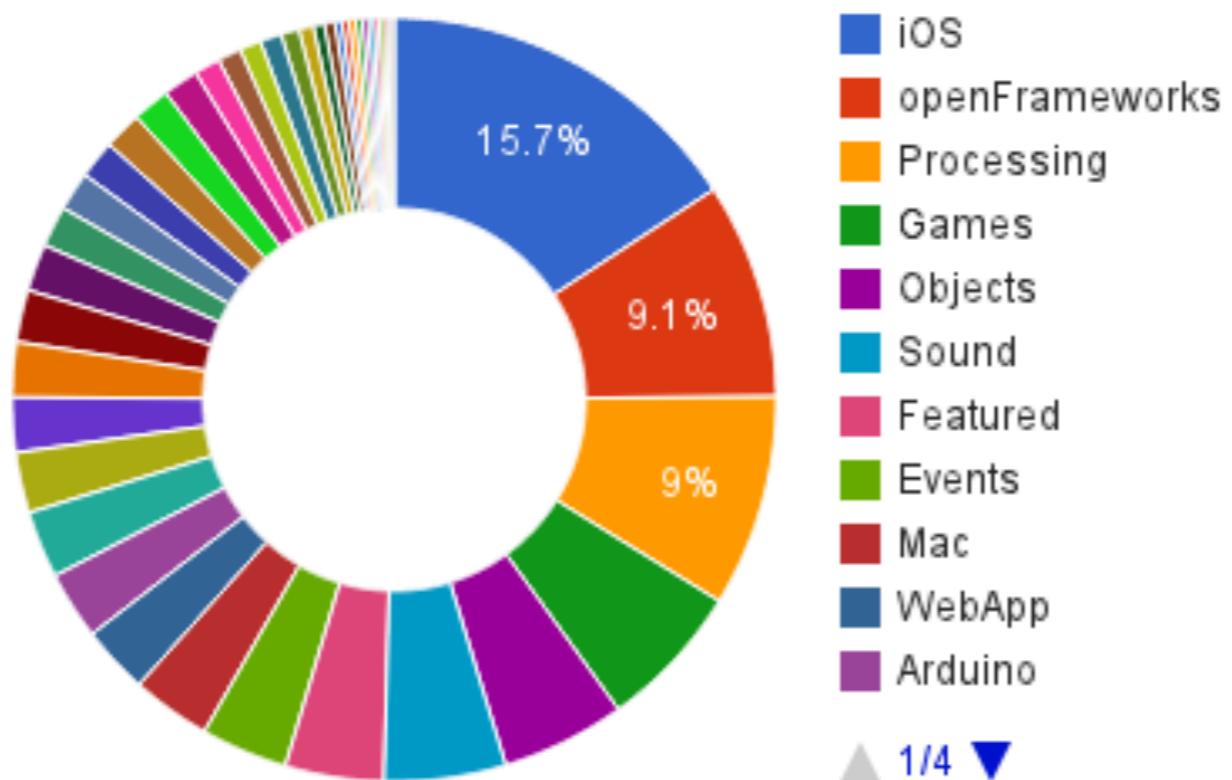
## Tags



## Tags



## Categories

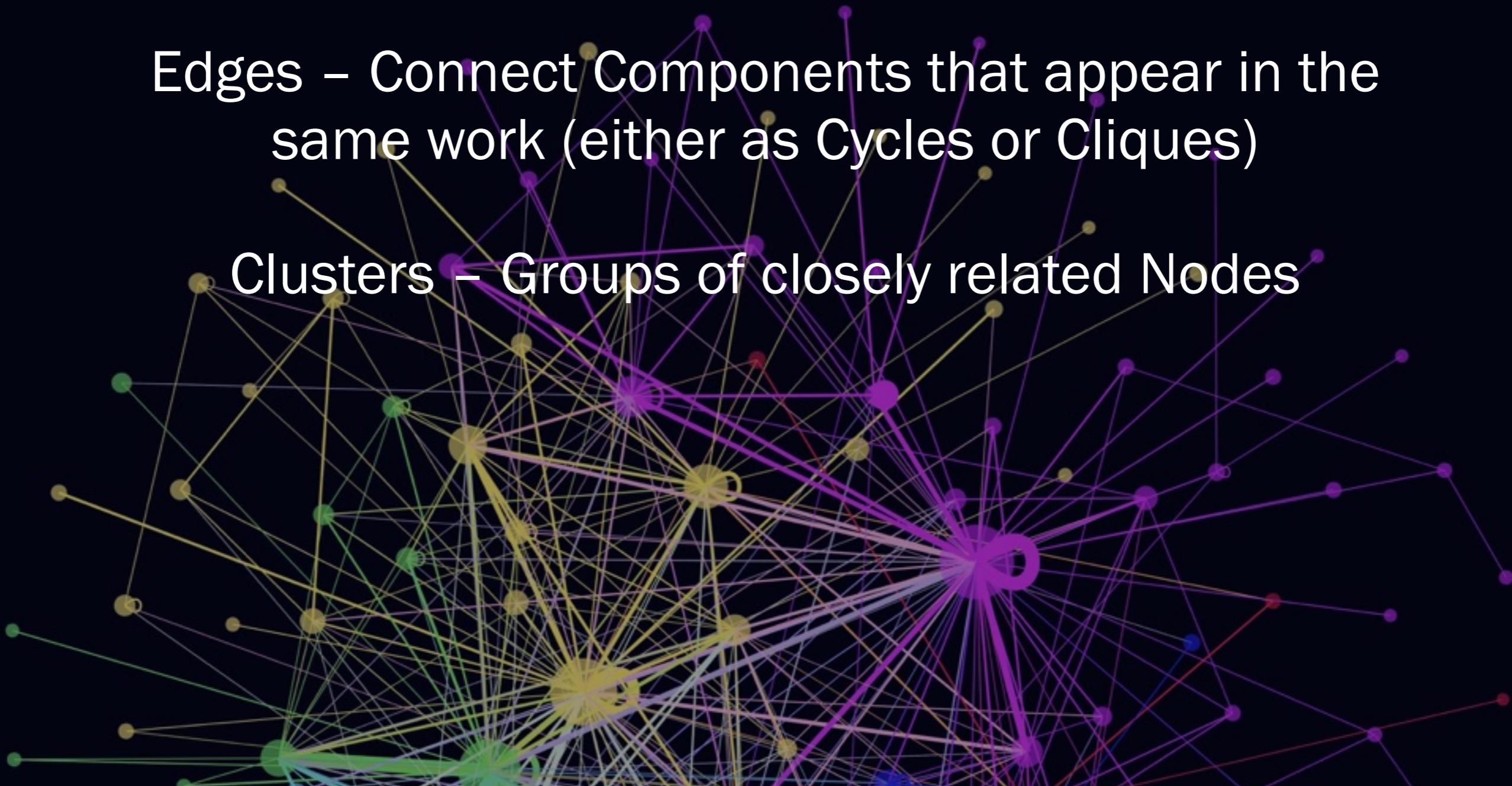


# Defining a network

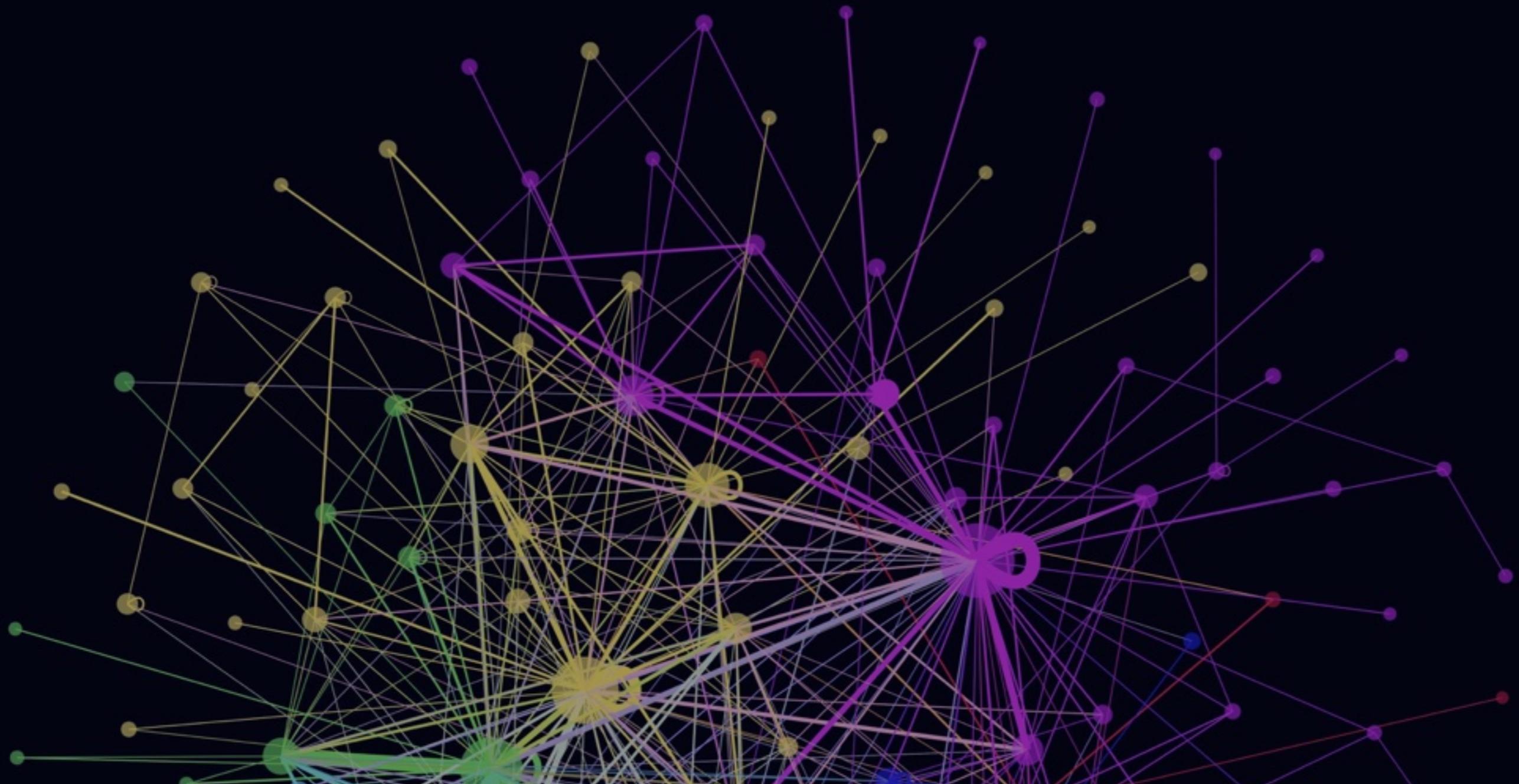
Nodes – The Components

Edges – Connect Components that appear in the same work (either as Cycles or Cliques)

Clusters – Groups of closely related Nodes

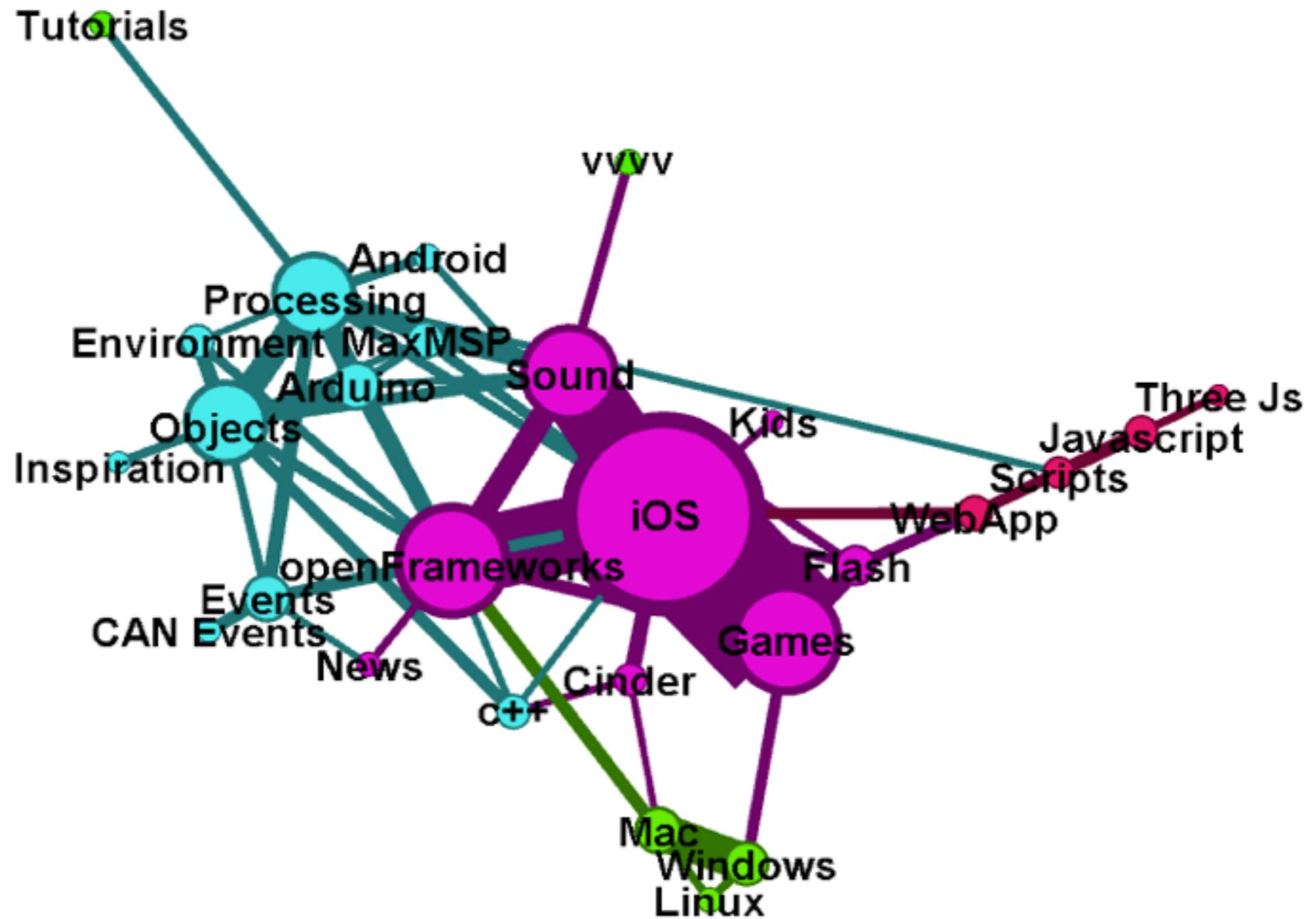


# Notable Components & Clusters





**CREATIVE  
APPLICATIONS  
NETWORK**



CREATIVE  
APPLICATIONS  
NETWORK

# Expected Connections

- Java & Processing
- Web: WebApp, JS, ThreeJS, & ~Flash

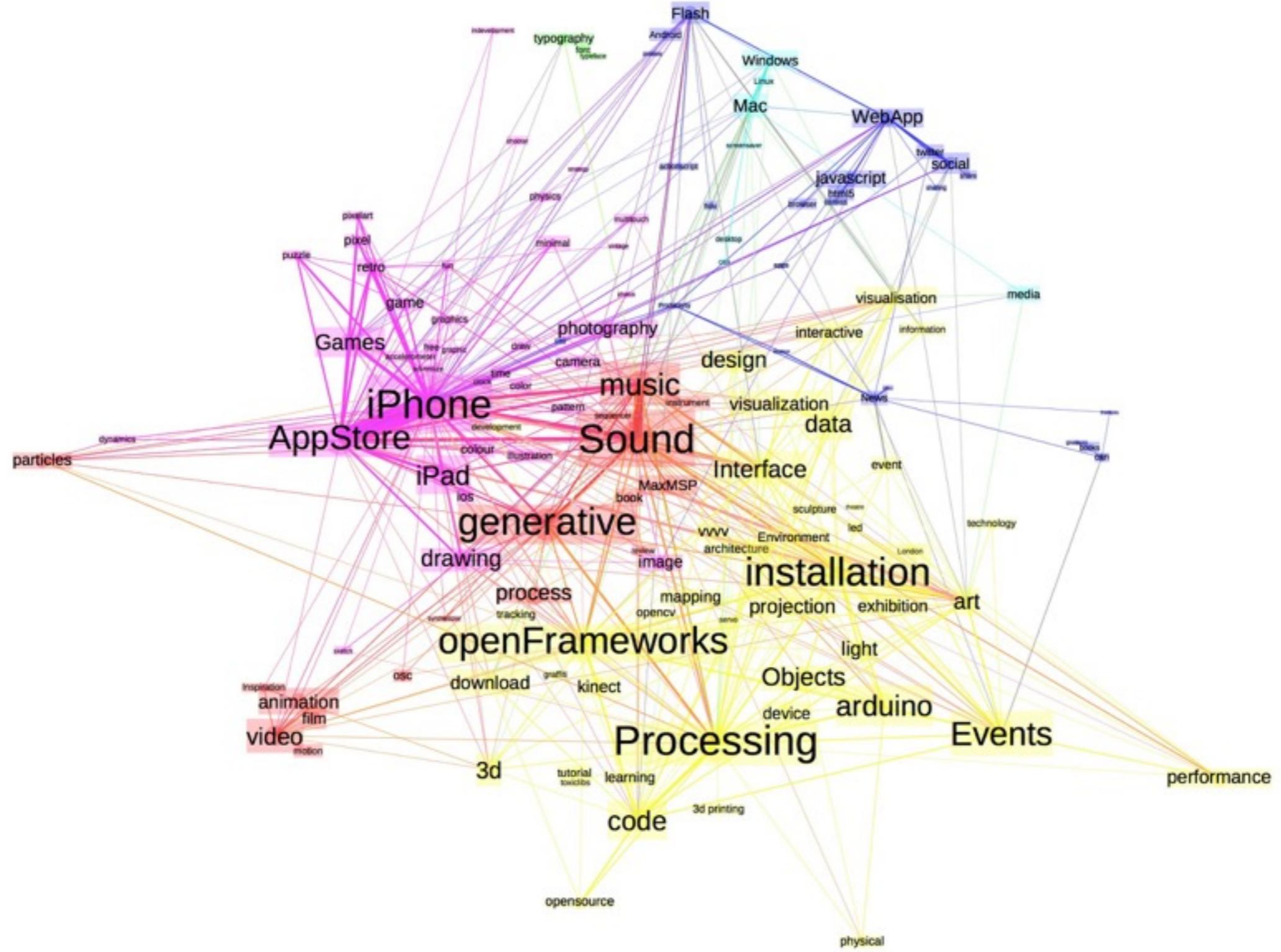
- C++ tied to oFx, Cinder, iOS

# Unexpected Connections

- Windows the only DesktopOS tied to Games

- Mac the only DesktopOS tied to Cinder, oFx

- Games & Sound tied strongly to iOS



CREATIVE  
APPLICATIONS  
NETWORK

# Major Clusters



the  
**creators**  
**project**



## Comparison with Creative Applications (CA)

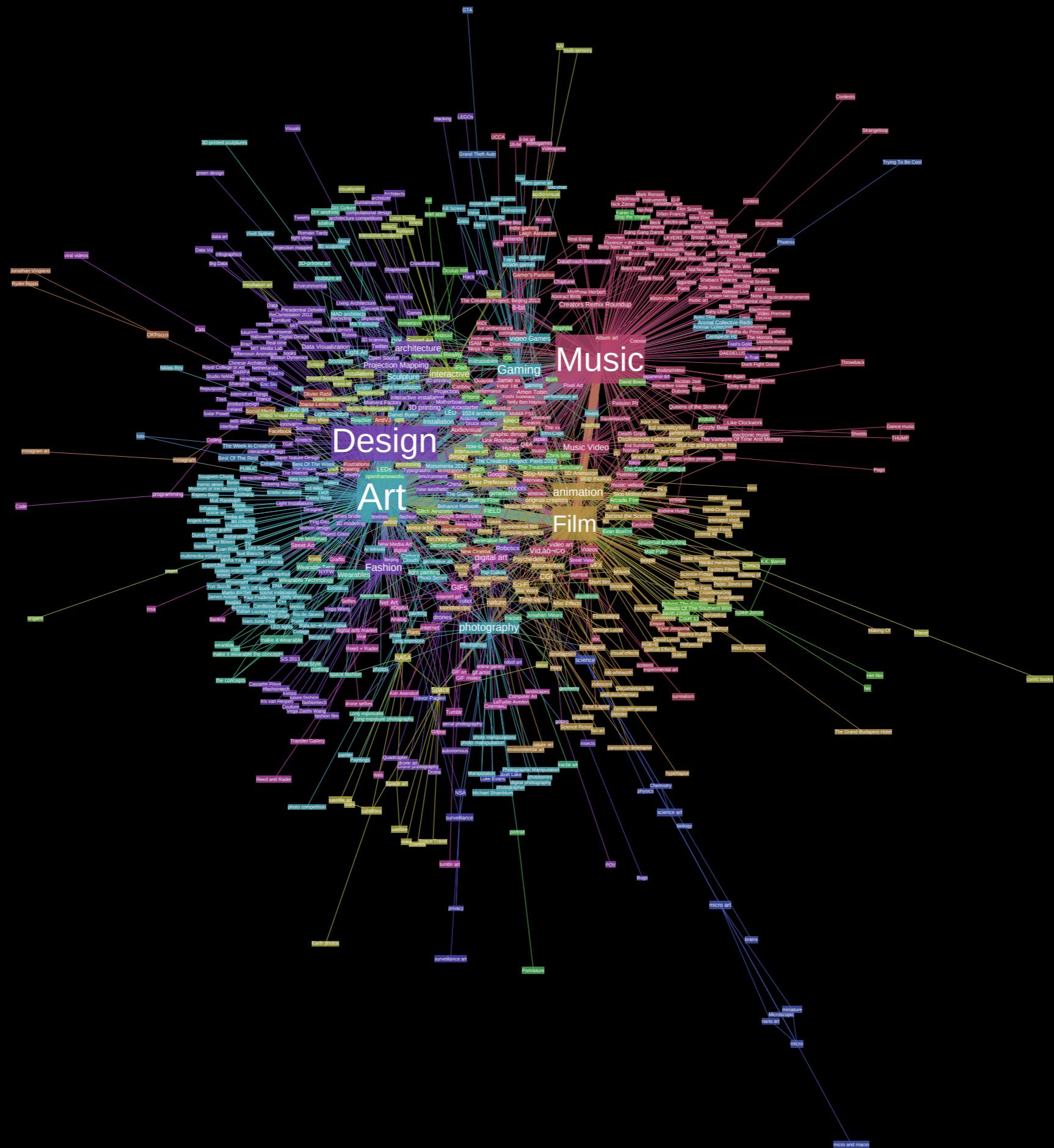
Common Components: Design, Art, Gaming, Music, Film

Music and Film are more important by comparison, along with Fashion.

Like CA, Design and Art have a strong connection.

Significantly more components which are People or Studios.

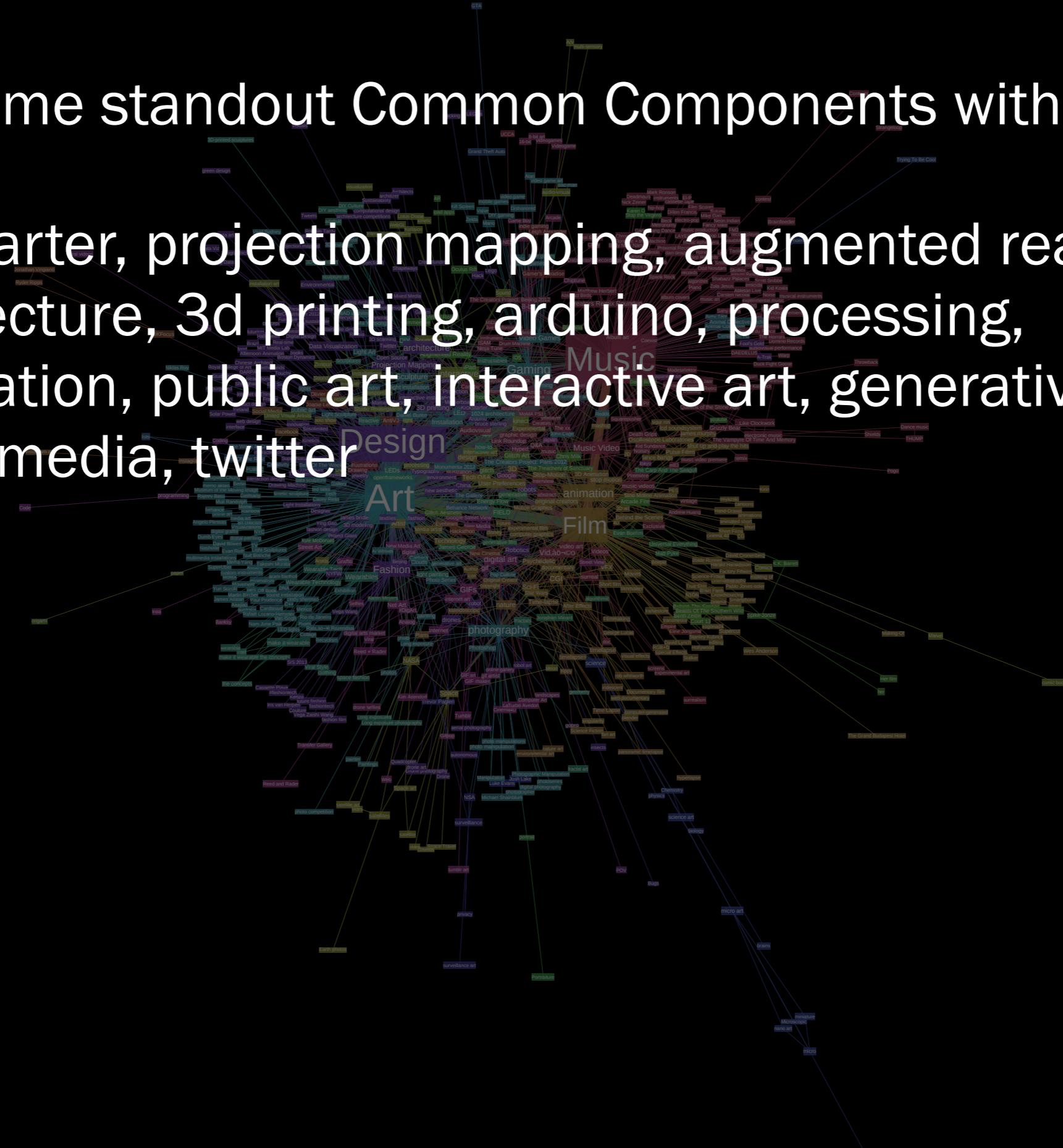
Less of a focus on tools and techniques than CA



# Some standout Common Components with CA

Kickstarter, projection mapping, augmented reality, architecture, 3d printing, arduino, processing, installation, public art, interactive art, generative art, social media, twitter





# Observations over time



Mode: IX, MODE\_RECORDING  
NodeLabel: NONE | CONSTANT | >SCALABLE |  
N Size: METRIC\_DEGREE  
N HSL: METRIC\_DEGREE  
N Palette: Short, Default (N=60)

Mode: IX, MODE\_RECORDING  
NodeLabel: NONE | CONSTANT | >SCALABLE |  
N Size: METRIC\_BETWEENNESS  
N HSL: METRIC\_BETWEENNESS  
N Palette: Short, Default (N=60)

Core group: Film, Art, Music, Design, ~Gaming, ~Fashion.

From Mid2012 to 2013 to 2014 we see an explosion of new components, a significant drop, and then new tags again.

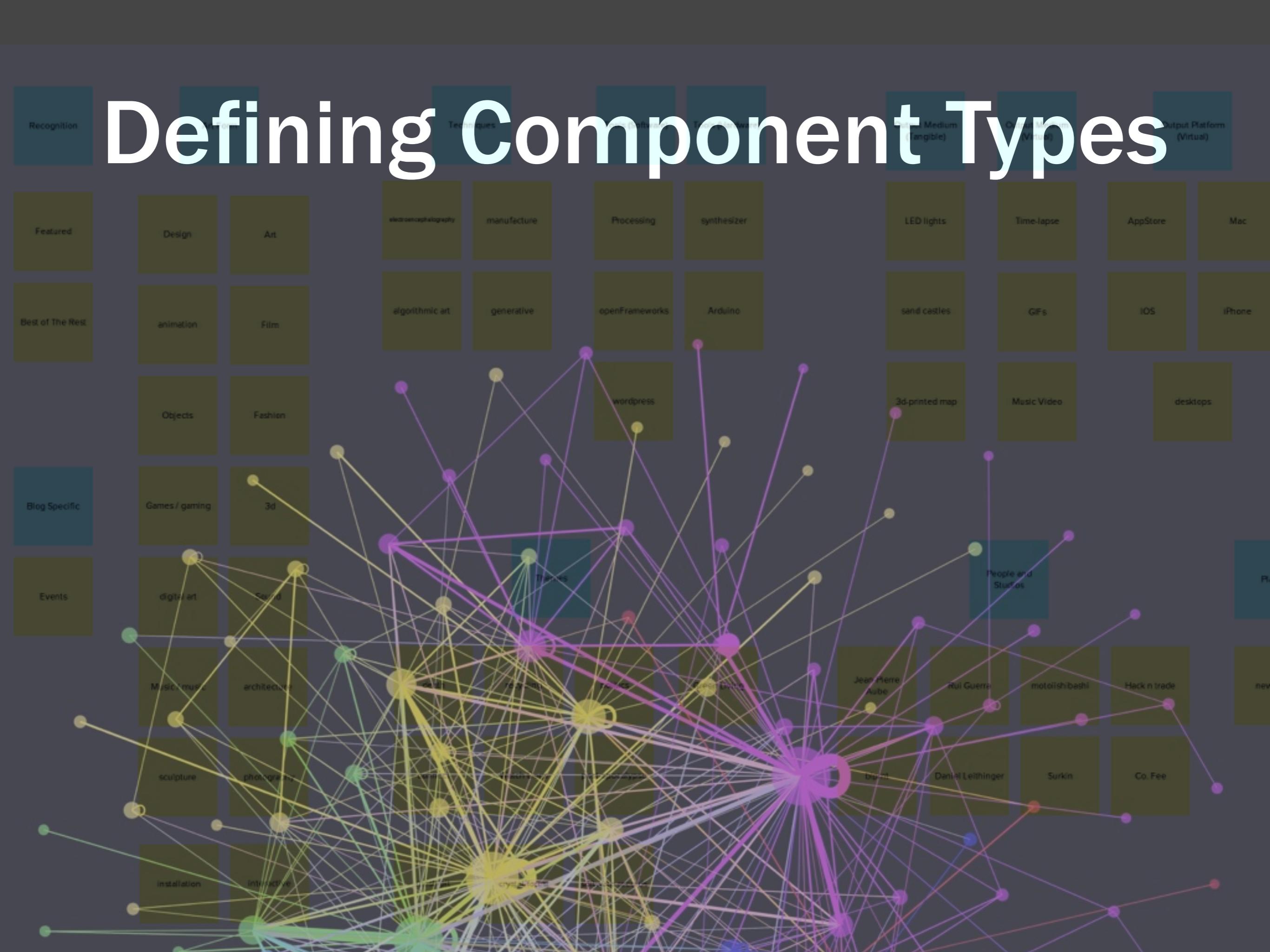
Art & Design are closely related and are common components.

Art & Film are high degree but relatively low betweenness compared to Music & Design. Hence music and design are both referenced often, and are strong bridges between various components.

Music is the most distinct of the major components, often segregated from the rest, followed by Gaming and Film.

Film & Gaming fluctuate between associating themselves with Music, and Art&Design.

# Defining Component Types



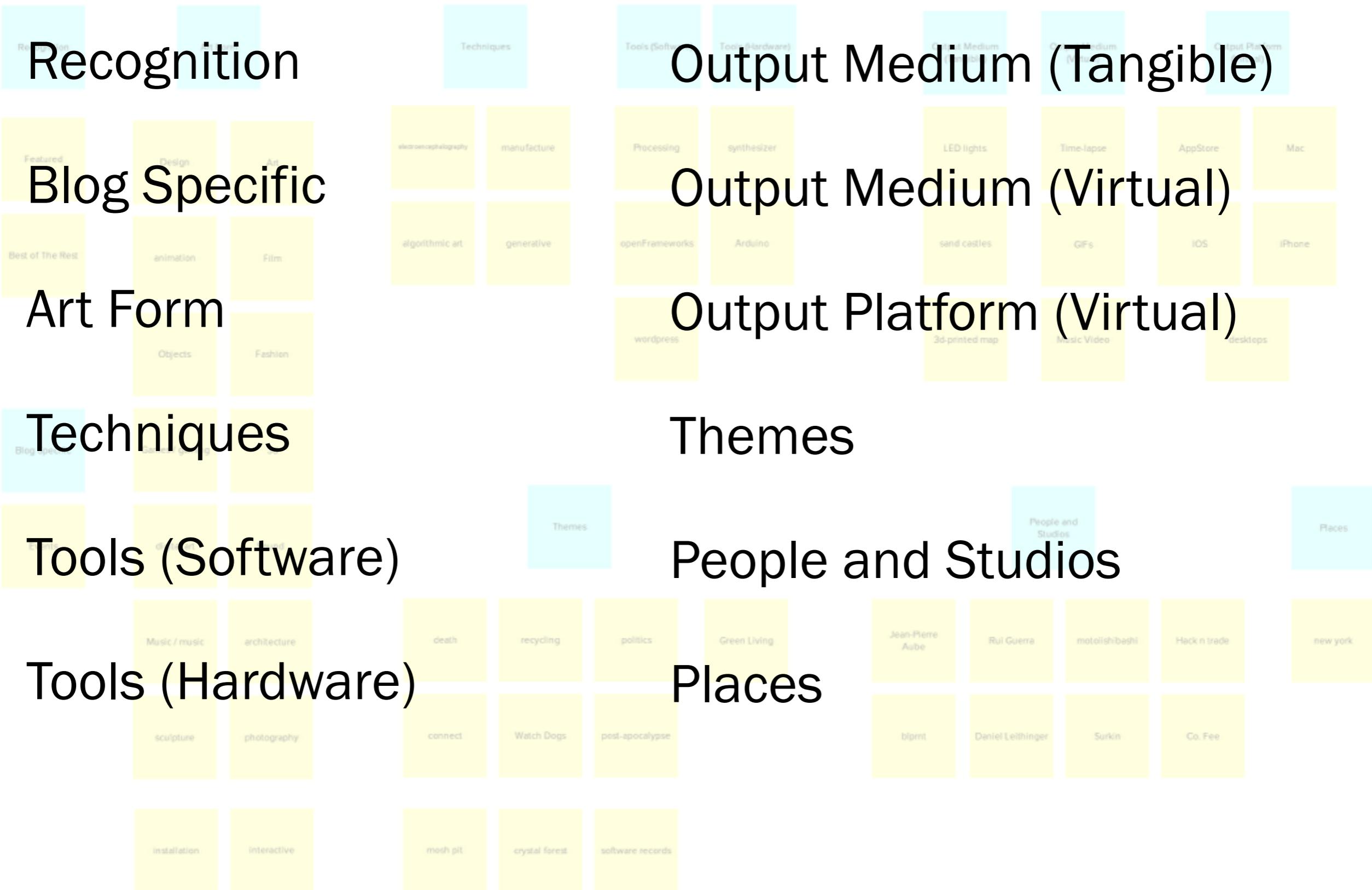
# 1 Categories during initial network exploration

- design studios (onformative)
- artists (Ammon Owed, Golan Levin)
- concepts (play, wind, physics, pixel)
- fields (robotics, graphic design)
- technologies (VVVV)

# 2 Categories from samples of Components

Recognition	Art Form	Techniques	Tools (Software)	Tools (Hardware)	Output Medium (Tangible)	Output Medium (Virtual)	Output Platform (Virtual)
Featured	Design Art	electroencephalography manufacture	Processing synthesizer		LED lights	Time-lapse	AppStore Mac
Best of The Rest	animation Film	algorithmic art generative	openFrameworks Arduino		sand castles	GIFs	iOS iPhone
	Objects Fashion		wordpress		3d-printed map	Music Video	desktops
Blog Specific	Games / gaming 3d						
Events	digital art Sound	Themes			People and Studios		Places
	Music / music architecture	death recycling politics Green Living			Jean-Pierre Aube Rui Guerra motolishibashi Hack n trade		new york
	sculpture photography	connect Watch Dogs post-apocalypse			bipm Daniel Leithinger Surkin Co. Fee		
	installation interactive	mosh pit crystal forest software records					

# 2 Categories from samples of Components





# Exploration with Component Types



Art & Design

# Art & Design

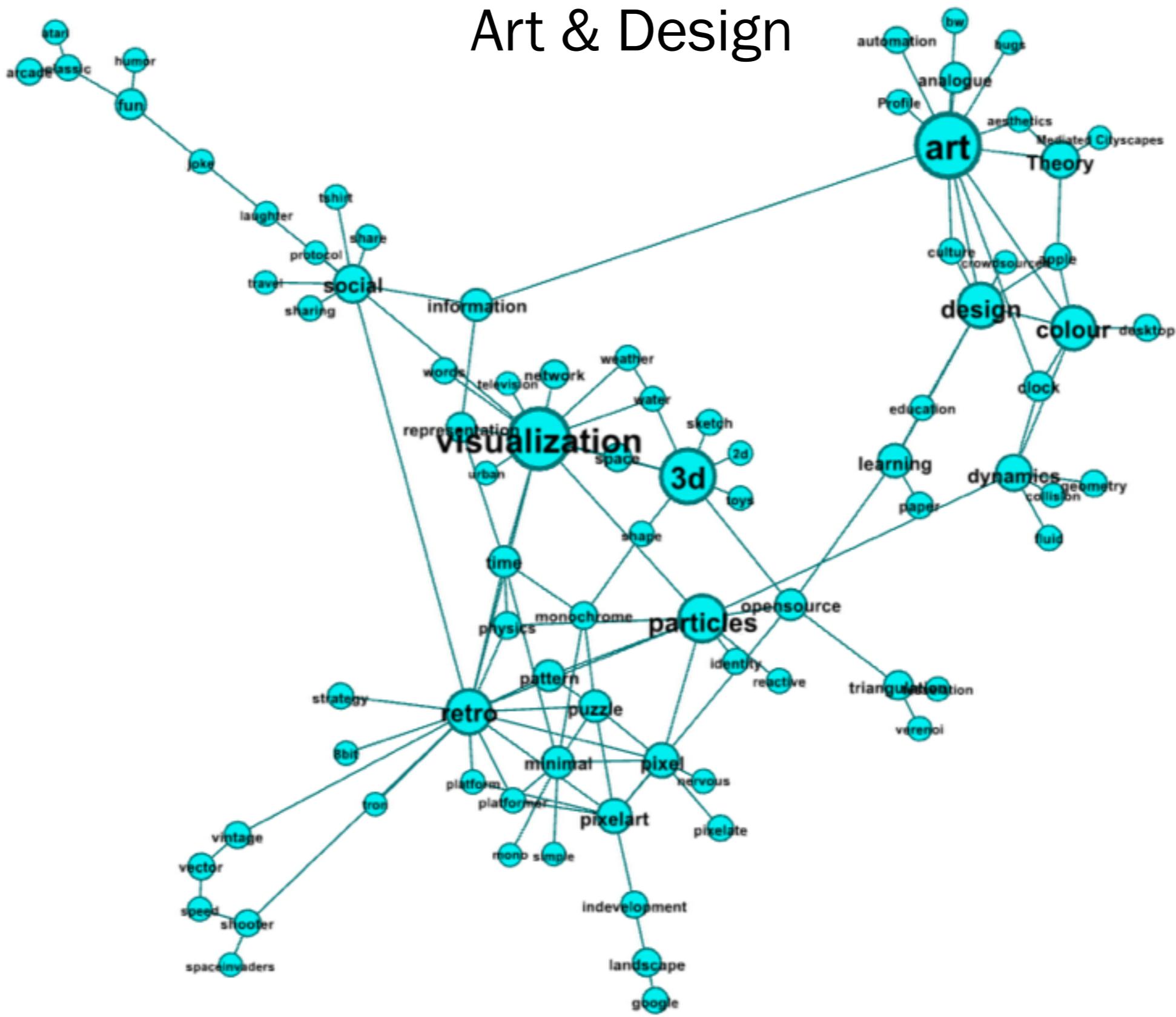




Image: <http://www.creativeapplications.net/theory/no-one-ever-cried-at-a-website-matt-pearson/>

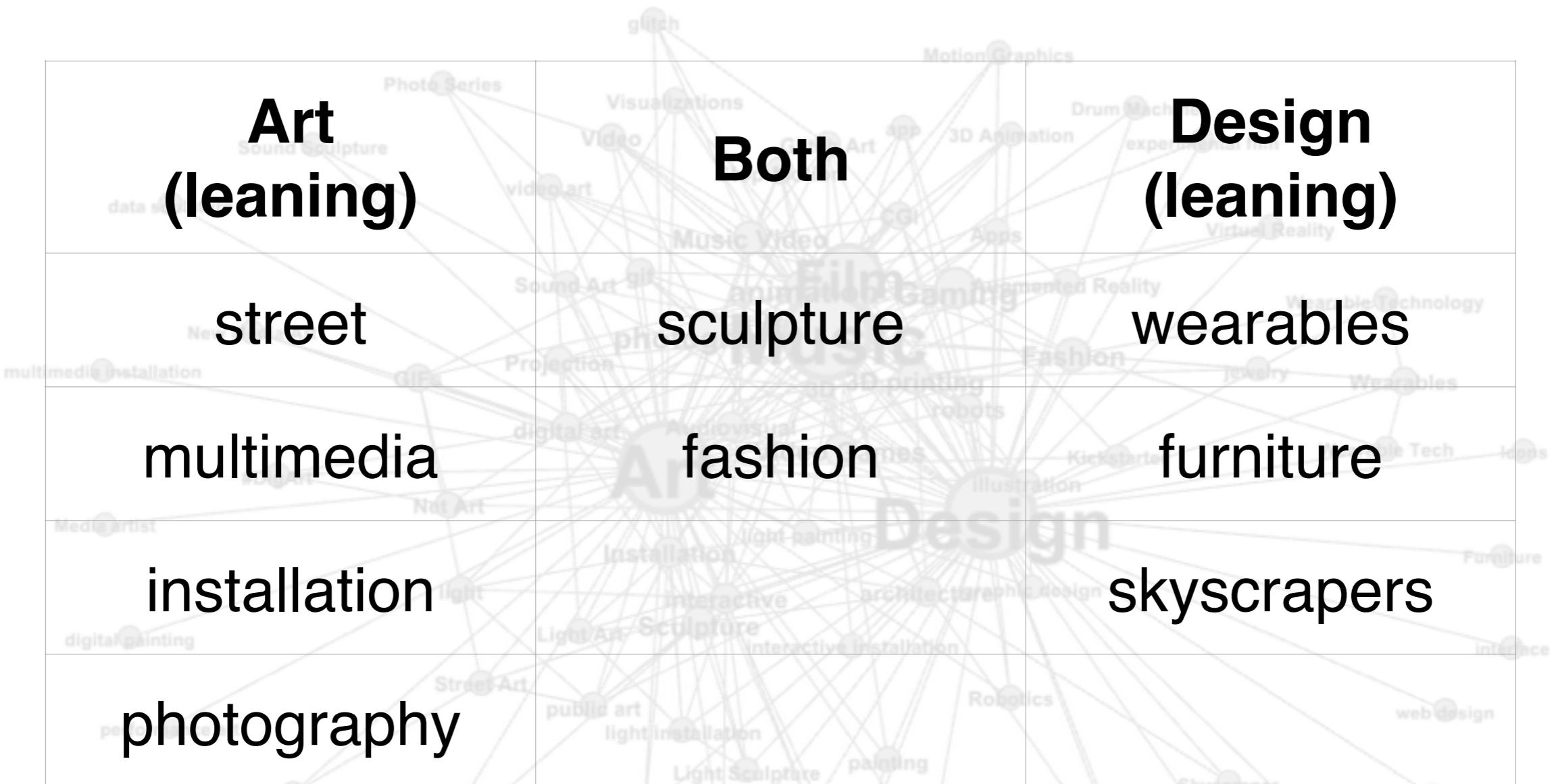
Components: Featured, Theory, art, code, design, Evan Boehm, Events, Kyle McDonald, learning, Matt Pearson, narrative, Novelty Waves, progress, resonate



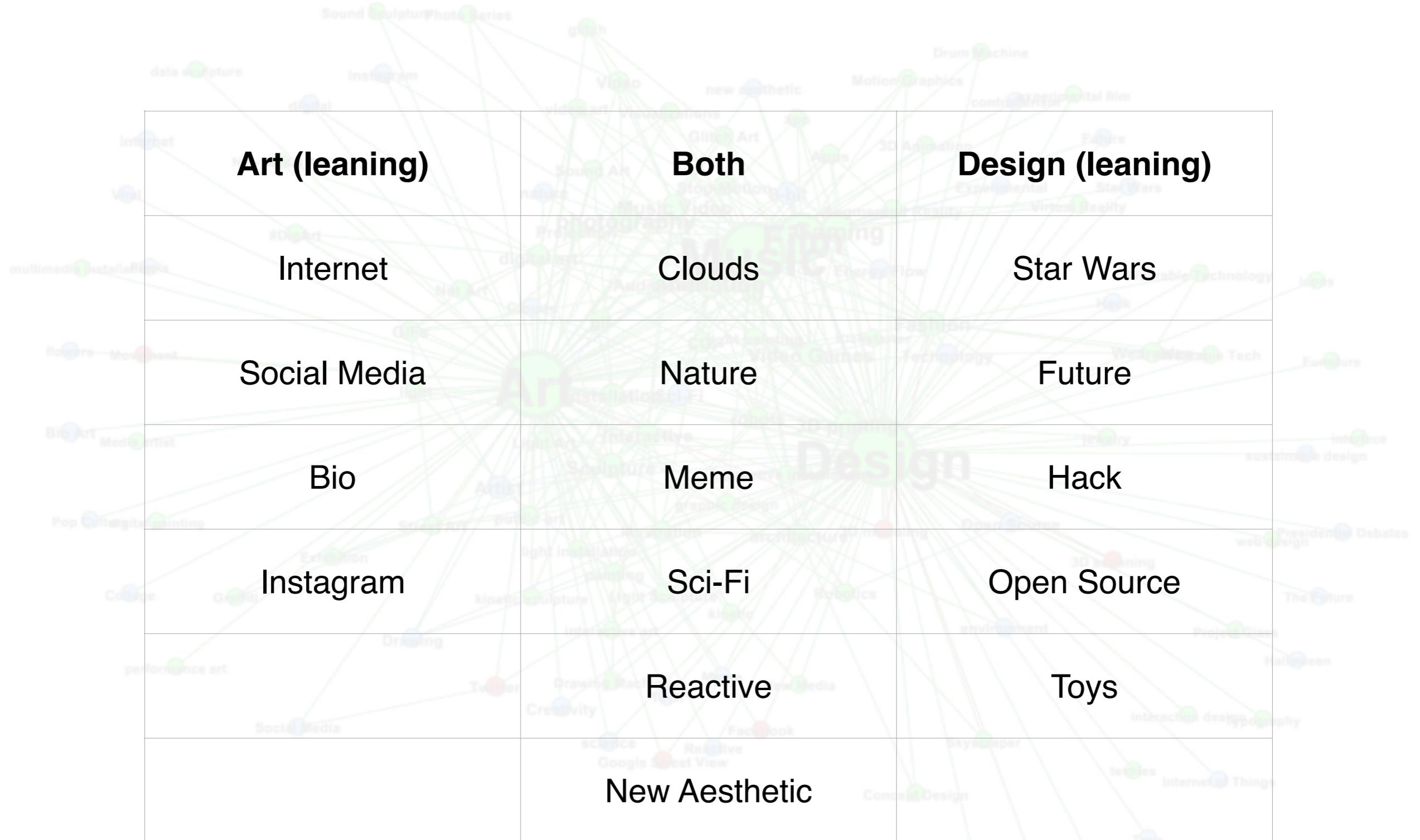
Image: <http://www.creativeapplications.net/games/the-card-players-playing-cards-as-a-method-for-designing-and-developing-games/>

Components: Games, abstractmachine, collaborators, design, eniarof, exhibition, paper, play, student, workshop

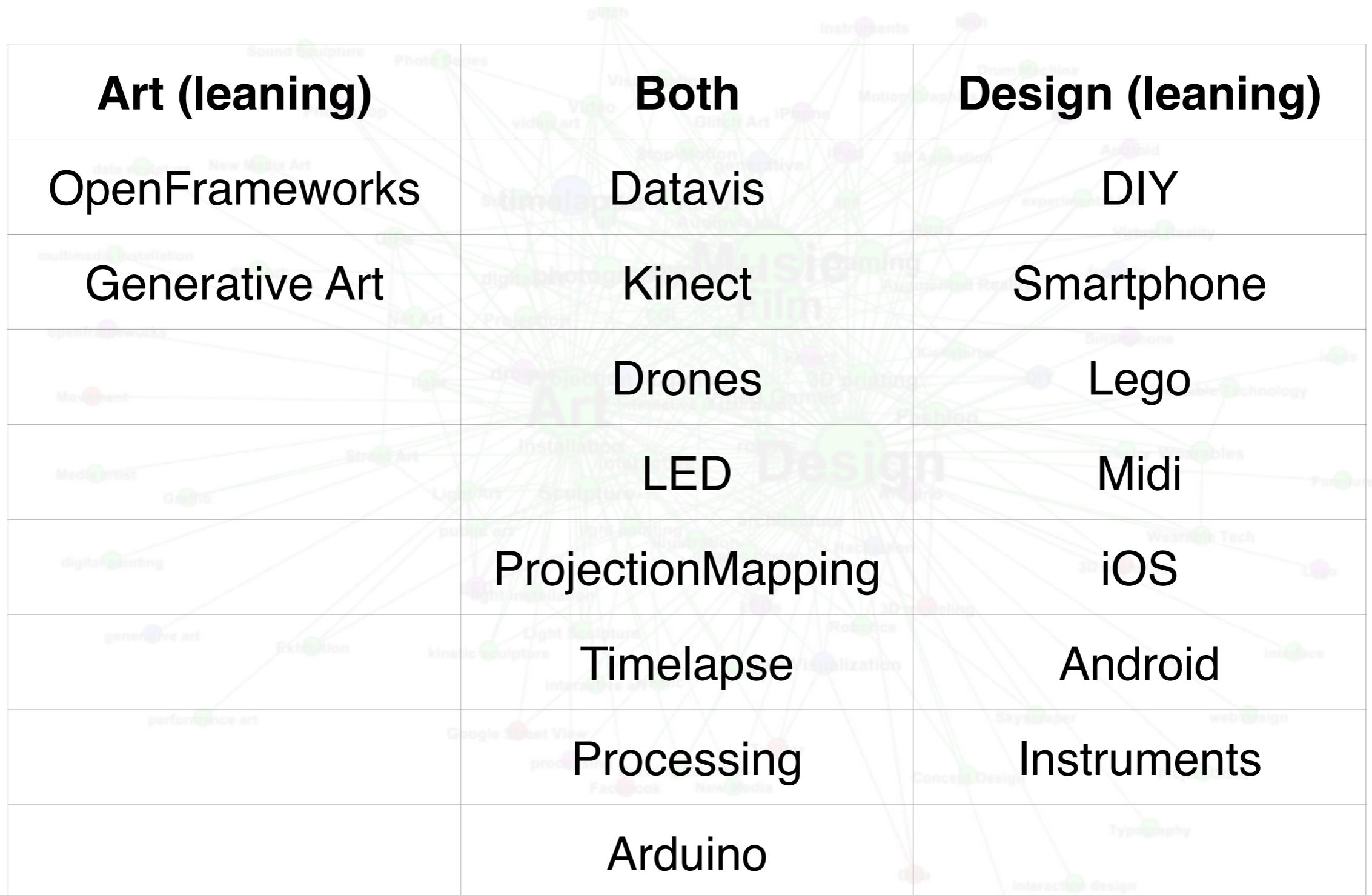
# Art & Design



# Art & Design - Themes

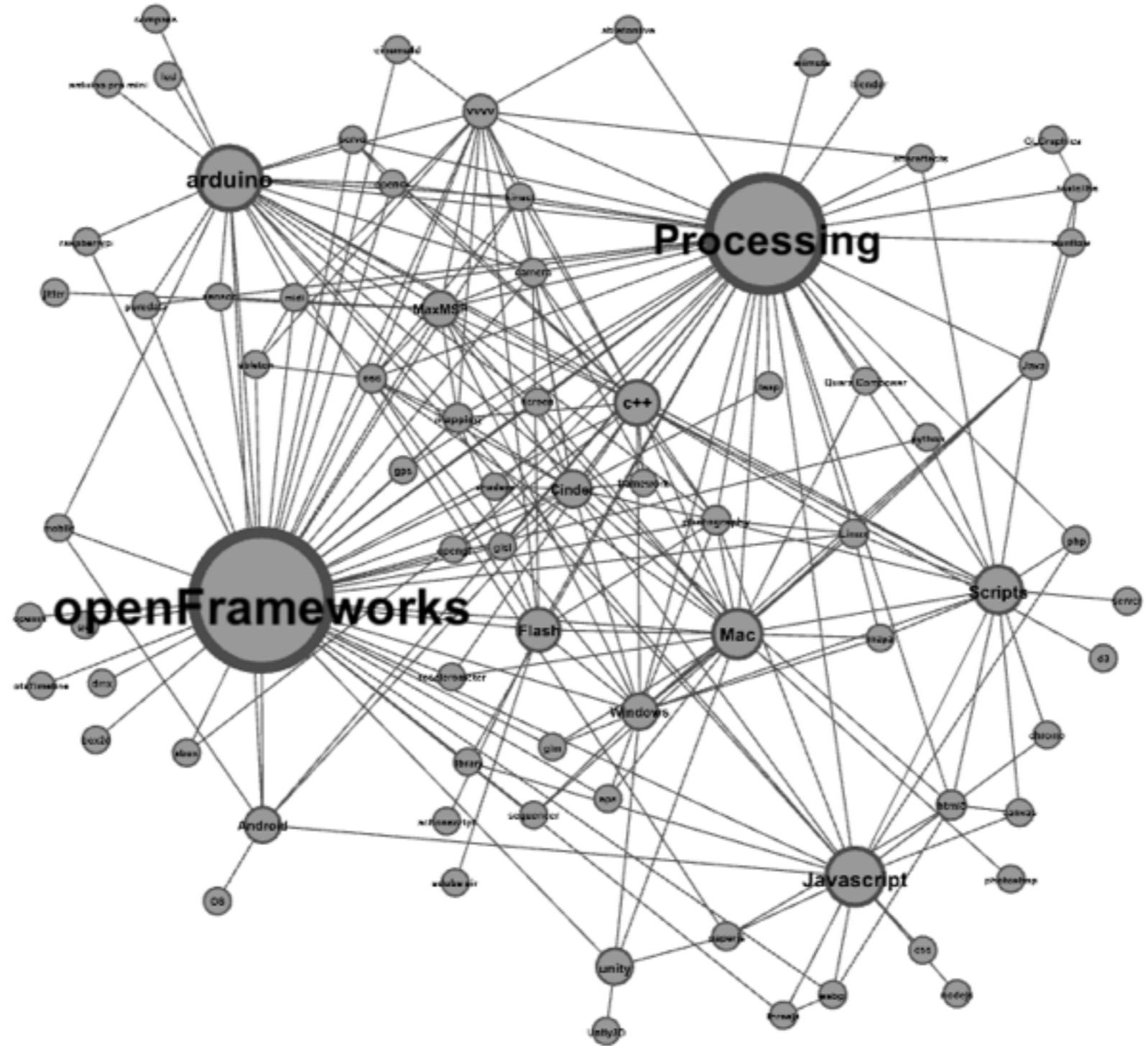


# Art & Design - Tools & Techniques



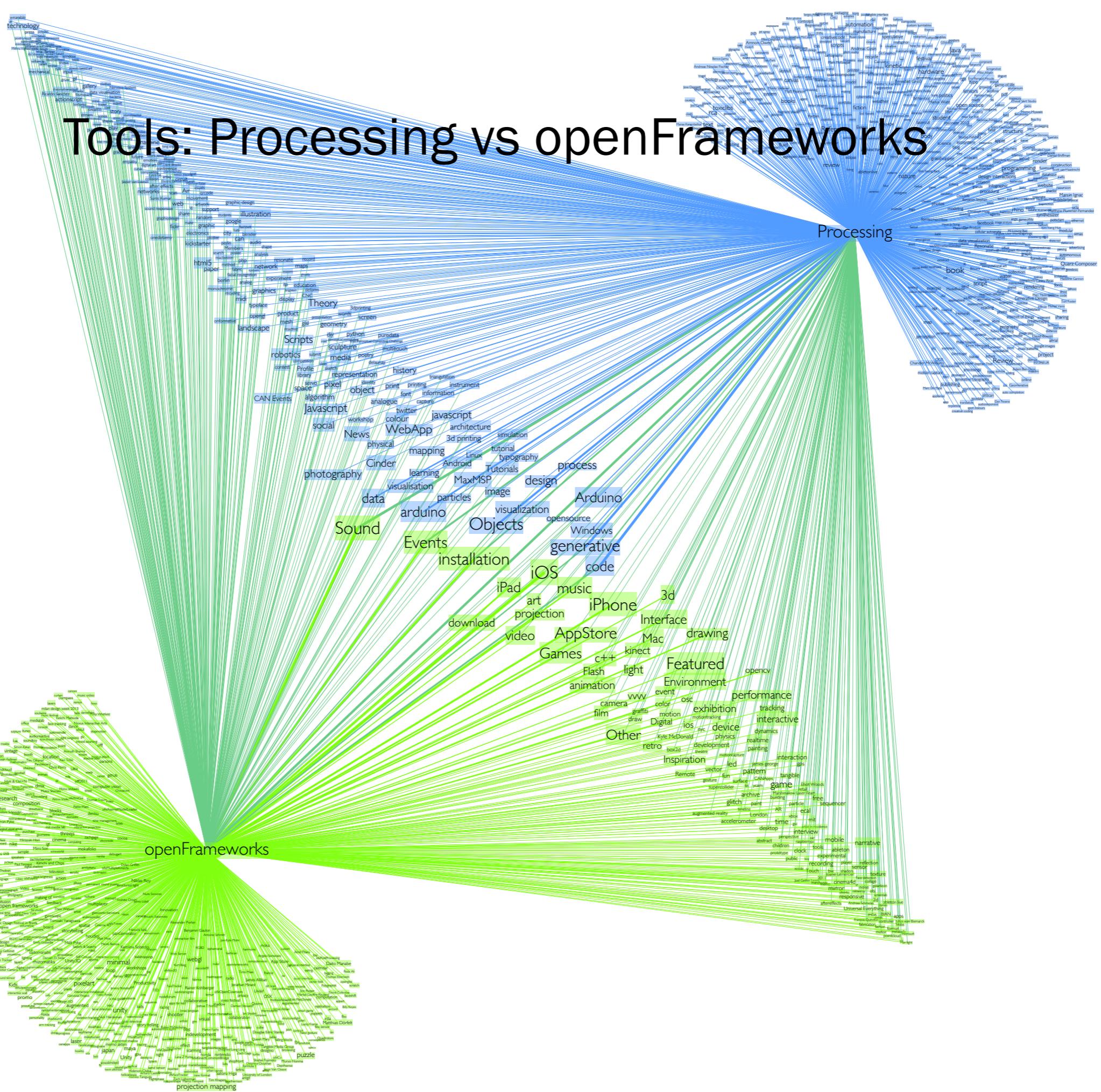
# Tools

# Tools



# Tools: Processing vs openFrameworks

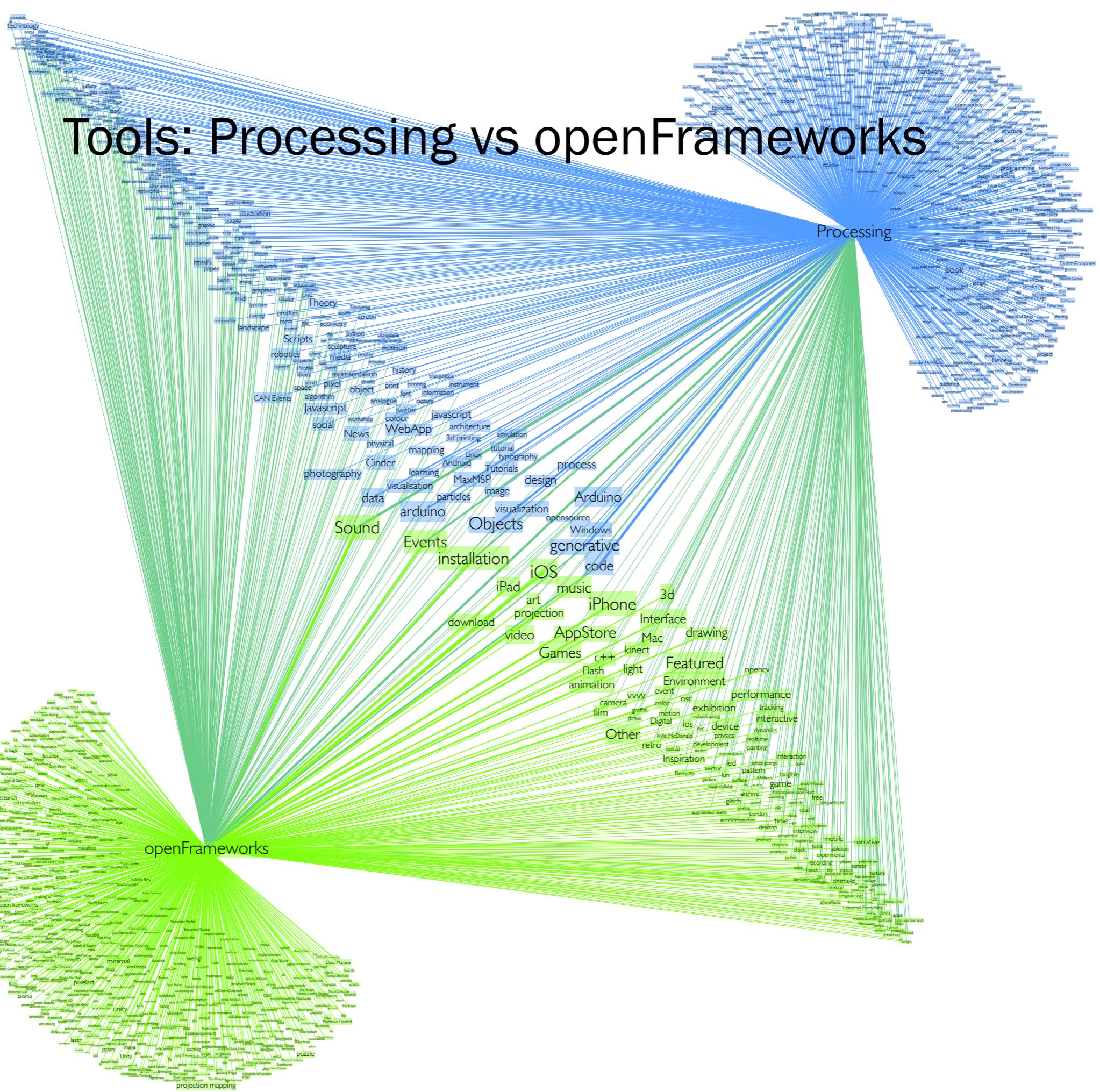
# Tools: Processing vs openFrameworks



# Tools: Processing vs openFrameworks

	Processing	oFx
Unique	CIID, Open Source, Grasshopper, hardware, automation, Reference, Procedural, Generative Design	minimal, projection mapping, unity, research, composition, threejs, Kids, webgl, puzzle
Strong Leaning	generative, code, Windows, Objects, Arduino, data	Sound, Events, Installation, iOS, iPad, iPhone, AppStore, Games, C++
Weak Leaning	Cinder, Photography, WebApp, javascript, html5, illustration, machine, Theory, robotics, Visualization, onformative	Environment, performance, opencv, tracking, interactive, VVVV, Flash, cinema4D, tangible, Mac, Featured

# Tools: Processing vs openFrameworks



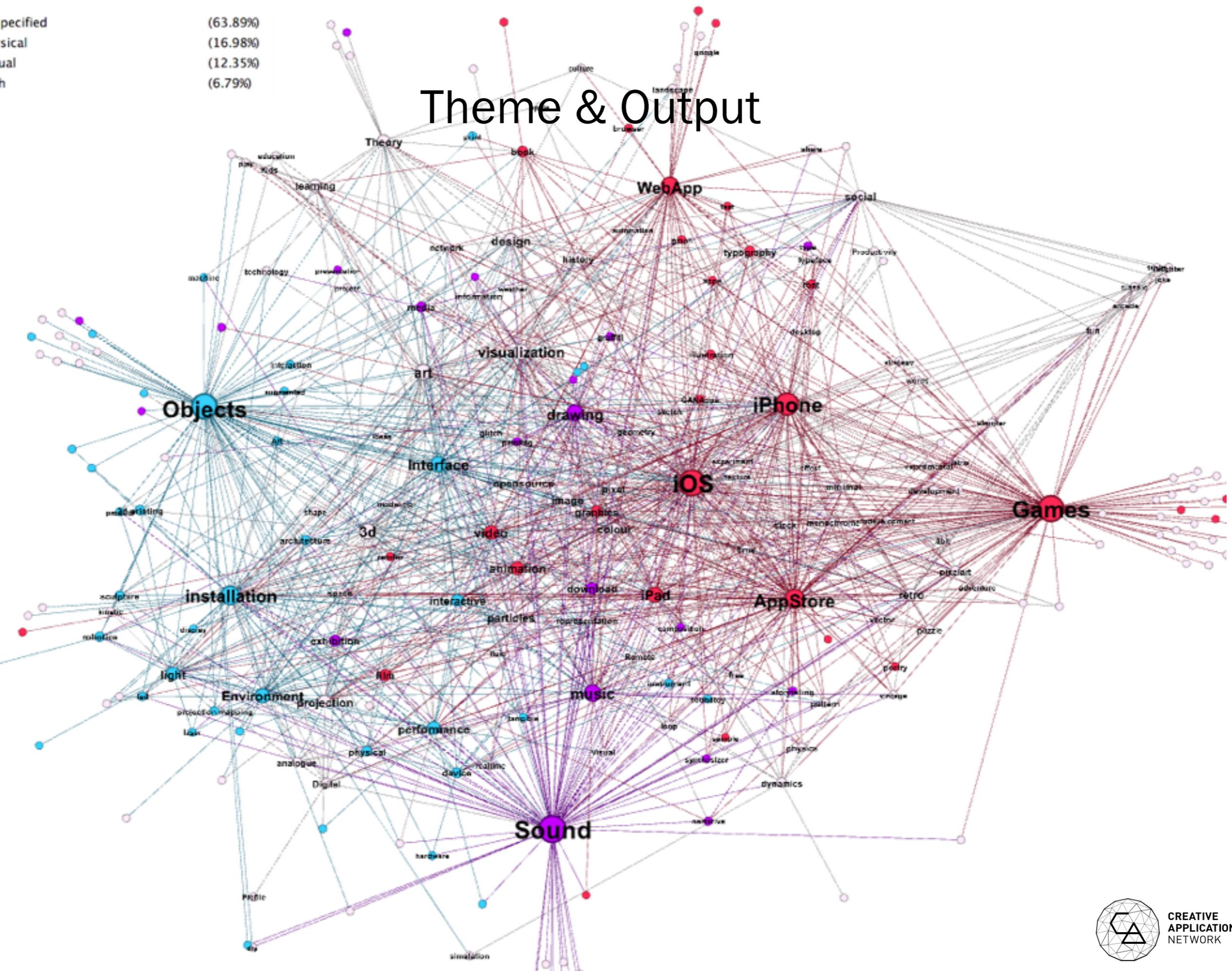
# Tangibility & The Rise of the Physical

# Categories

Input	Tangibility (for Output, Techniques, & Tools)
Theme	Entity, Recognition, Events, Blog, Places
Tool	Entity, Recognition, Events, Blog, Places

## Technique

Input	Theme	Tool	Technique	Output	Tangibility	Entity	Recognition	Events	Blog	Places
#fashiontech				#DigArt Art digital art	Virtual Both Virtual	::vtol::				digital arts market
				Net Art	Virtual					
				Fashion	Physical		1024 architecture			



# Output & Tools

Processing

Objects

arduino

openFrameworks

installation

Environment

VVVV

c++

Sound

MaxMSP

exhibition

mapping

projection

kinect

Games

Flash

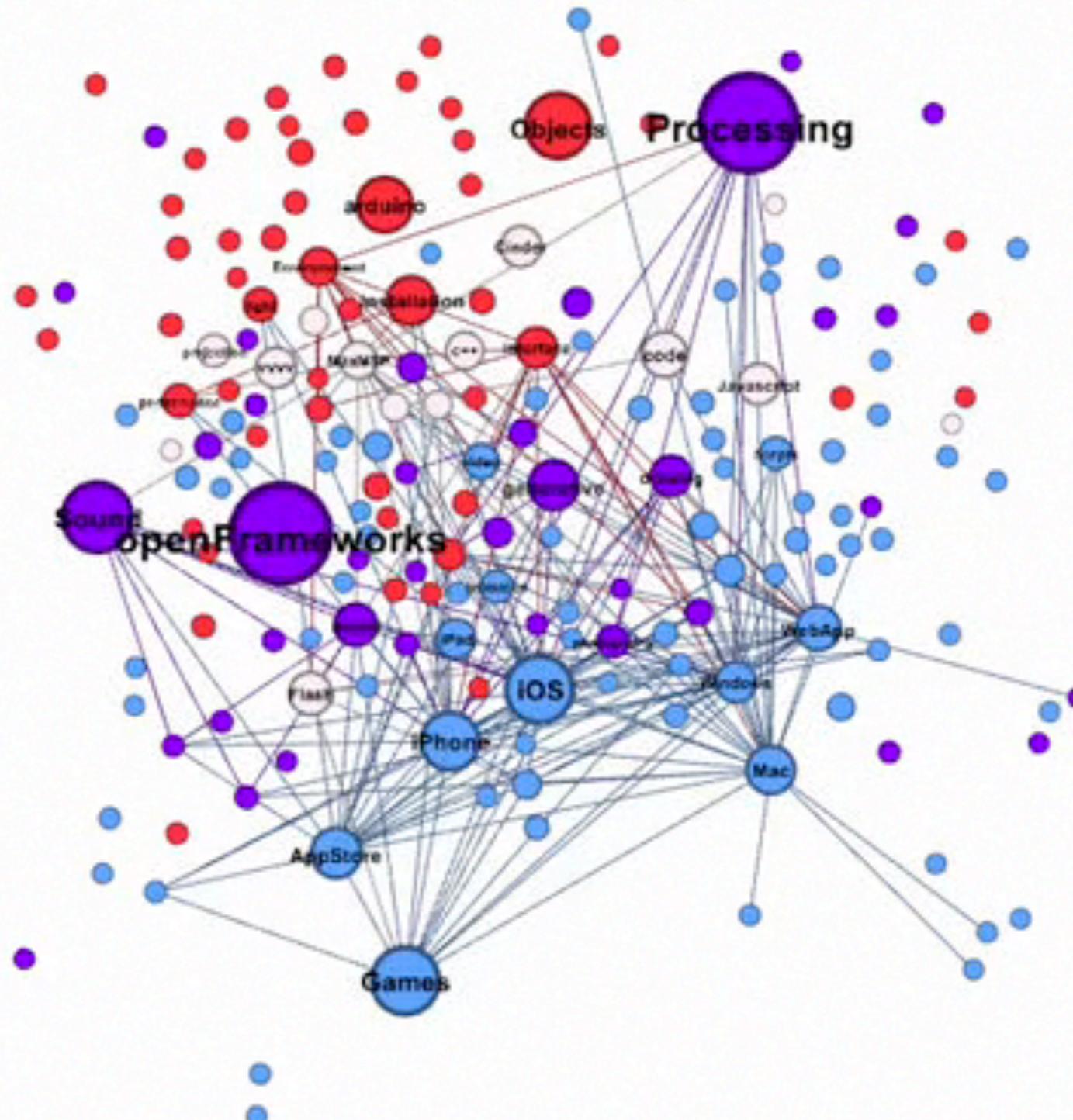
performance

abition

realtime

U-DO

# Output & Tool & Technique



# Applications

creative process

curation

language

collaboration

# Applications

initial stages of creative process



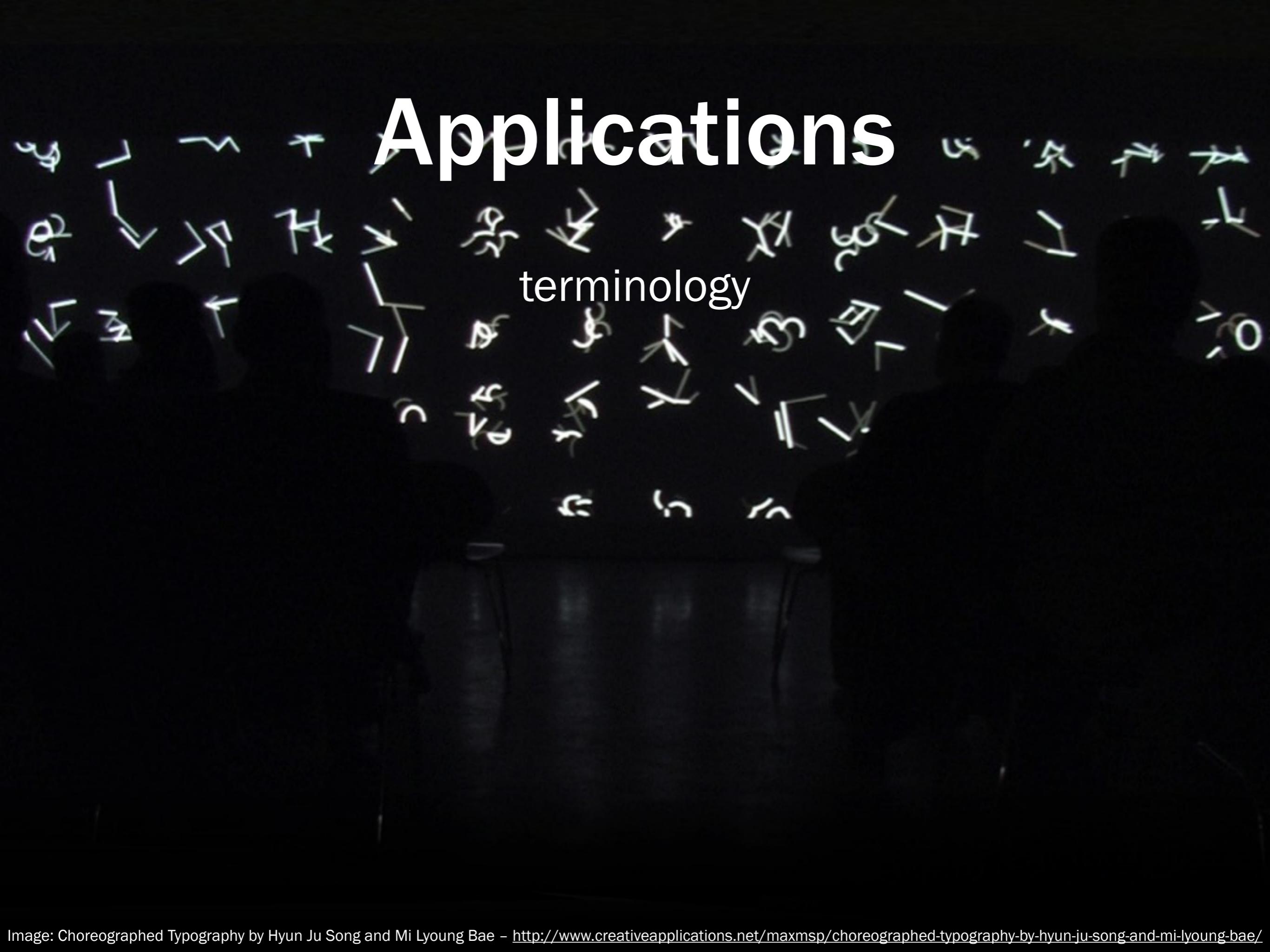
# Applications

curation



# Applications

terminology



# Applications

collaboration



# Applications

creative process

curation

language

collaboration

# Future Work

A photograph of a man with a beard and a red beanie, looking at a wall covered in numerous small, colorful digital screens or panels. The screens display various abstract patterns and colors, creating a vibrant, multi-layered visual effect. The man appears to be examining the display closely.

Additional Data.

Network Analysis: Dynamic Modularity, Social Attributes. New definitions of the network.

Identification of novelty and evolution.

Automated insights.

A user-friendly exploratory resource.

