IMMERSIVE TECHNOLOGY

Art, Activism, and Community

en foco inc   BRONXNET   PREGONES PRTT   BRONX COUNCIL ON THE ARTS   NEW YORK STATE OF OPPORTUNITY | Council on the Arts

A NOTE ON ACCESSIBILITY

ASL

This presentation will be simultaneously translated to ASL. Please **speak clearly** and at a **steady pace**, **one person** at a time.

Closed Captions

To start closed captions **click on [CC]** button found on the bottom of your Zoom window.

Translations

Zoom translations has been activated for this presentation. **Choose your language** and set volume for translation.

Audio Descriptions

Audio description track is **NOT available**. **But** we will take extra care to **describe ourselves**, the **setting**, and all **images** and **videos** shown on screen.

EN FOCO IMMERSIVE TECH PROGRAM OVERVIEW

Workshop 1

Thursday, August 11 @6pm

Introduction to Immersive Tech

Basic Terminology, Equipments, Uses,
Artists Presentations in Art, Gaming, and Immersive Sound

Workshop 2

Friday, August 19 @5pm

Performing Arts & Immersive Tech

Pregones PRTT, Kyoung's Pacific Beat,
Anonymous Ensemble, and North Star
Projects.

Workshop 3

August TBA

Education and Community

Workshop 4

September TBA

Artists & Immersive Tech

(conclusion of program)

Follow Us!

Instagram, Facebook, EventBrite, email-list

WORKSHOP 1:
INTRO TO IMMERSIVE TECH

OPENING: Introductions (15 min)

Accessibility, Program Overview, Partners, & Presenter

PART 1: Tech Basics + Artists Presentations (1 hr)

Tech Basics, Metaverse & Art, VR/AR, Gaming, Tools & Industry,
And Immersive Sound

PART 2: Panel Discussion on Social Implications (30 min)

Artists' Experiences, Ethics & Accountability, Accessibility, Advocacy

CLOSING: Q&A (15 Min)

HOSTS & PRESENTERS

EN FOCO

BRONXNET

Betty Yu
Artist/En Foco
Media Fund Recipient

Oscar J. Rivera
Programs Director

Antonio Serna
Artists/Arts Worker
Program Coordinator

Will Roberts
Artist in Residence

Trish Gianakis
Artist in Residence

Audrey V. Duncan
Director of Community Affairs

+

+

+

All Hands In Motion
(ASL Team)

COLLABORATORS

EN FOCO

Founded in 1974, En Foco makes BIPOC photographers' work visible to the art world, yet remains accessible to underserved communities.

BRONXNET

BronxNet provides local TV by & for people of the Bronx.

Pregones Puerto Rican Traveling Theater

A multigenerational performing ensemble, multidisciplinary arts presenter, and owner/steward of bilingual arts facilities in The Bronx and Manhattan.

PART 1: BASICS & ARTISTS PRESENTATIONS

Antonio Serna: Basics

Trish Gianakis: **Metaverse & Art**

Will Roberts: **VR/AR Gaming, Tools & Industry**

Betty Yu: **Immersive Sound**

ANTONIO SERNA

Tech Basics

Basic Terms VR, AR, MR, XR

Equipment, Uses, VR Kits/Cost

IMMERSIVE TECH BASICS

VIRTUAL REALITY (VR)

A **environment** that can be **experienced** through a smartphone, computer or "VR" headset.

AUGMENTED REALITY (AR)

Technology that **adds digital elements** to our real environment.

augment = to add

ALSO experienced through a smartphone or "VR" headsets, As well as through "AR" glasses.

MIXED REALITY (MR)

MR is a technology that **mixes** both **virtual and real worlds** to provide a **smooth** experience between worlds.

EXTENDED REALITY (XR)

A general term used to describe the use of **all "immersive" technologies** above.

IMMERSIVE TECH BASICS

VIRTUAL REALITY (VR)

IMMERSIVE TECH BASICS

AUGMENTED REALITY (AR)

IMMERSIVE TECH BASICS

EQUIPMENT

| VIRTUAL REALITY (VR) | AUGMENTED REALITY (AR) | MIXED REALITY (MR) |

VR HEADSETS

AR GLASSES

MR HEADSETS

EQUIPMENT

VIRTUAL REALITY (VR) | AUGMENTED REALITY (AR) | MIXED REALITY (MR)

 VR HEADSETS

VR gives you **total immersion**,
All activities inside a virtual environment.

*With VR/AR controllers you can **interact within VR/AR environments** and with other **avatars** (People)

 AR GLASSES

Brings **information** to your glass screen: info text, messages, alerts, vitals. Intended for **all-day use everywhere** you go or use in **specified areas** like table tops.

Use your **eyes like a computer mouse** to **select** and **click** items on your glasses or computer or smartphone, leaving **hands free** for other task.

 MR HEADSETS

Headset allows for **viewing the real** world **mixed with virtual** content.

You can **manipulate real and virtual objects** in your real environment **without** the need for VR Controllers. (AR and VR cannot)

IMMERSIVE TECH BASICS

HOW IMMERSIVE? - LEVELS OF IMMERSION

Factors that sometimes affecting the immersive feeling:

1st Sense Level:

2-D Visual

Basic Audio

Touch (action)

2nd Sense Level:

360° Visual (3 DoF)

Stereo Audio

Touch + Feel (sensation)

Smell

3rd Sense Level:

360°+body movement (6DoF)

360 Audio

Touch + Feet + Manipulate

Smell + Taste

COMFY IMMERSIVE   **OK, IMMERSIVE**   **TOTAL IMMERSION**

VR/AR USES

ART   SCIENCE   EDUCATION   RECREATION   ENTERTAINMENT

HEALTH   MILITARY   ENGINEERING   URBAN PLANNING
(DE-GENTRIFICATION)

JOURNALISM   SOCIALIZING   HOME & FAMILY   TRAVEL   ARCHITECTURE
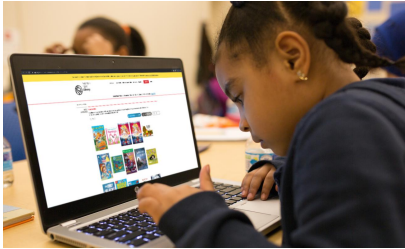& INTERIOR DESIGN

Headset

Controllers

VR KITS

Tracking bases

Controllers

No Cost, Low Cost, Mid Range, Studio

A comparison of options

VR/AR KITS: NO COST

REQUIRED:
iphone or Android
Optional: computer

ADD ON:
Controller: +$10-$15
Headphones:+$10-$15
Subscriptions: +$2 Mo.

NYC Public Computers + internet
500 Sites in NYC

iOs & Android
Smart phones + internet

Low Cost: BronxNet VR
Equipment & Studios

FREE
(WebVR + VR
Videos)

Existing
(WebVR + VR APPs +
VR Videos (youtube)

Coming Soon!
Training/Certificate Required
Inquire with BronxNet

Capturing Accessories
360° motor mount $80

VR/AR KITS: LOW COST

REQUIRED:
iphone or Android
Optional: computer

ADD ON:
Controller: +$10-$15
Headphones: +$10-$15
Subscription: +$2 Mo.

MIDDLE to HIGH RANGE

Cardboard

Rigid system

Soft Foam

$8-$15
(VR)

$20-40
(VR)

$60-80
(VR+AR)

$400-$1200
(VR+AR+STEREO)

VR/AR KITS: STUDIO

Motion capture suits

Volumetric Capture Stage

Post-production stations

$$$ Per hour   +   Space   + Computer time

REQUIRED:
Lost of money
Or Grants!
Or…
Collective/Community power!
(donated equipment, space, labor,cameras, computer, etc)

ADD ON:
Editors: $$$
Sound designers: $$$
Animators: $$$
Programmers: $$$
Technicians: 4$$

VR KITS: PROs & Cons

NO COST	LOW COST/MID RANGE	STUDIO
QUICK & EASY	STEP-UP REQUIRED	TRAINING/ CERTIFICATES
USES YOUR EXISTING EQUIPMENT	UPGRADE EXISTING OR BUY ADDITIONAL EQUIPMENT	RENT EQUIPMENT REQUIRES LATEST HARDWARE & SOFTWARE
EXPERIENCE ANYWHERE 3-DOF	SOME SPACE REQUIRED 3 to 6-DOF	LARGE SPACE REQUIRED 3-6 DOF

IMMERSIVE TERMS

SPARK AR   METAVERSE   MAPPING/TRACKING   REAL TIME   VIRTUAL SPACES   NFT

NEAR FREQUENCY CHIP (NFC)   BLOCKCHAIN   CRYPTOCURRENCY   LEDGER   WALLET MINTING

TILT BRUSH   OCULUS   UX   UI   FIREWALL XR   METAVERSE GAMING   SIMULATION   AVATARS

SKINS   ROBLOX   METAVERSE PRIVACY   SANDBOX   AUDIO AR GPS GEOLOCATION   SPATIAL

AUDIO   MAPPING   ECHOES   WEB BASED SOFTWARE

More to Come...

TRISH GIANAKIS

Metaverse & Art

Terms: Spark AR, Metaverse, Mapping/Tracking, Realtime, Virtual Spaces, NFT, Near Frequency Chip (NFC), Blockchain, Cryptocurrency, Ledger, Wallet, Minting, Tilt Brush, Oculus, UX, UI, Firewall.

WILL ROBERTS

Gaming, Tools & Industry

Terms: XR, Metaverse Gaming, simulation, Avatars, Skins, Roblox, Metaverse Privacy, Sandbox

BETTY YU

Immersive Sound

Terms: Audio AR, GPS Geolocation, Spatial Audio, Mapping, Echoes (App/Free Web Based Software)

PART 2: PANEL ON SOCIAL IMPLICATIONS

Ethics & Accountability, Accessibility, and Empowerment VR (15 min)

Things you should be aware of.

EMPOWERMENT VR

ADVOCATES

Algorithmic Justice League https://www.ajl.org

The Algorithmic Justice League's mission is to raise awareness about the impacts of AI, equip advocates with empirical research, build the voice and choice of the most impacted communities, and galvanize researchers, policy makers, and industry practitioners to mitigate AI harms and biases.

Media Justice **https://mediajustice.org/**

Building a powerful grassroots movement for a more just and participatory media —fighting for racial, economic, and gender justice in a digital age.

ON OUR TERMS - BY US/FOR US

Black Girls Code https://www.blackgirlscode.com

We build pathways for young women of color to embrace the current tech marketplace as builders and creators by introducing them to skills in computer programming and technology.

AbTech https://abtec.org

Aboriginal Territories in Cyberspace is an Aboriginally determined research-creation network whose goal is to ensure Indigenous presence in the web pages, online environments, video games, and virtual worlds that comprise cyberspace.

Wampum.codes http://wampum.codes

Artist and Technologist Amelia Winger-Bearskin interviews native and indigenous people who make cool things with new technologies.