

VR | AR | MR

CASE STUDY

아트 테크 4.0

4차 산업혁명 시대의
예술과 테크놀로지의
융합

1.

아다 & 그레이스(Ada & Grace)
Science Museum

2.

홀로그램으로 만나는 홀로코스트 생
존자의 증언
(New Dimension in Testimony)
USC Institute for Creative
Technologies

3.

몽세미셸(Mont-Saint-Michel)
혼합현실 프로젝트

4.

오픈 헤리티지 프로젝트
Google Art & Culture
CyArk

CASE STUDY

아트 테크 4.0

4차 산업혁명 시대의
예술과 테크놀로지의
융합

5.

디지털 아담 (Digital Adam)
Metropolitan Museum of Art

6.

Because the Night
이머시브 시어터

7.

안티곤(Anti-Gone)
혼합현실 공연 추천작



아다 & 그레이스 Ada & Grace

: 최초의 대면-대화형 디지털 도슨트.

관람객의 질문에 대한 답변,
테크놀로지(자신과 소통하는 인터랙
션 단계) 설명, 전시물 추천 등
관람 경험 향상.

[영상자료 : Talking with Ada and Grace](#)

[출처 : Ada and Grace : Toward Realistic and Engaging Virtual Museum Guides](#)

SAMPLE SCENARIO

자기소개와
전시, 개념 설명

HANDLER: What are your names?

ADA: My name's Ada.

GRACE: And I'm Grace. We're your Virtual Museum Guides. With your help, we can point you towards exhibits that will get you thinking! Or answer questions about things you've seen here.

ADA: What do you want to learn about?

HANDLER: I'm interested in computers.

GRACE: Here at Cahners ComputerPlace, you can *build* your own model computer, solve a *puzzle* like a computer, examine computer *brains*, and learn how to *think* like a computer. Which one of these do you want to put through your processor?

HANDLER: I want to learn how computers think.

GRACE: At Logic Land you can learn how computers think by trying to decode a bitmap, and interacting with Boolean logic gates.

HANDLER: What are Boolean logic gates?

GRACE: Boolean logic gates are the basic building blocks of computing! Remember these three words; AND, OR, NOT. Each of these is a type of logic gate. Like real gates you walk through, some need a key, or even two identical keys to let you through. Head over to Logic Land, or ask one of our volunteers if you want to learn more.

SAMPLE SCENARIO

박물관 및 전시,
디지털 도슨트에
관한 정보 제공

Other common exchanges include information about the Museum of Science and Cahners ComputerPlace:

HANDLER: Why is this place named Cahners ComputerPlace?

ADA: Cahners ComputerPlace is named after Norman Cahners, a publisher based in Boston, and longtime supporter of the museum.

GRACE: Welcoming 300,000 visitors annually, Cahners ComputerPlace offers a one-stop resource for software that inspires people to create, explore and learn.

ADA: Did you read that in the brochure?!

The twins are also capable of responding to questions about their own exhibit and supporting technology:

HANDLER: What is your technology?

ADA: We're virtual humans. We use speech recognition technology to identify your words...

GRACE: [Finishing her twin's sentence] ...and use statistics to figure out the meaning of the words based on context. Once we know what you're talking about, we'll reply appropriately.

SAMPLE SCENARIO

사회적 성 역할과
재치있는 대답

Grace and Ada are also intended to highlight the major role that women have played historically in the development of computer science:

HANDLER: Who are you named after?

ADA: Our namesakes are Ada Lovelace and Grace Hopper.

GRACE: Yeah, they may be old-fashioned names, but both from the most modern computing women of their time.

ADA: In the 1800s, Ada Lovelace predicted that computers would some day help us write music and create art.

GRACE: And in this past century, Grace Hopper created a type of computer program called a compiler, which helps people tell computers what to do.

ADA: It could be said that Ada inspired Grace.

GRACE: Or that Grace did all the work, in which case our names are perfect.

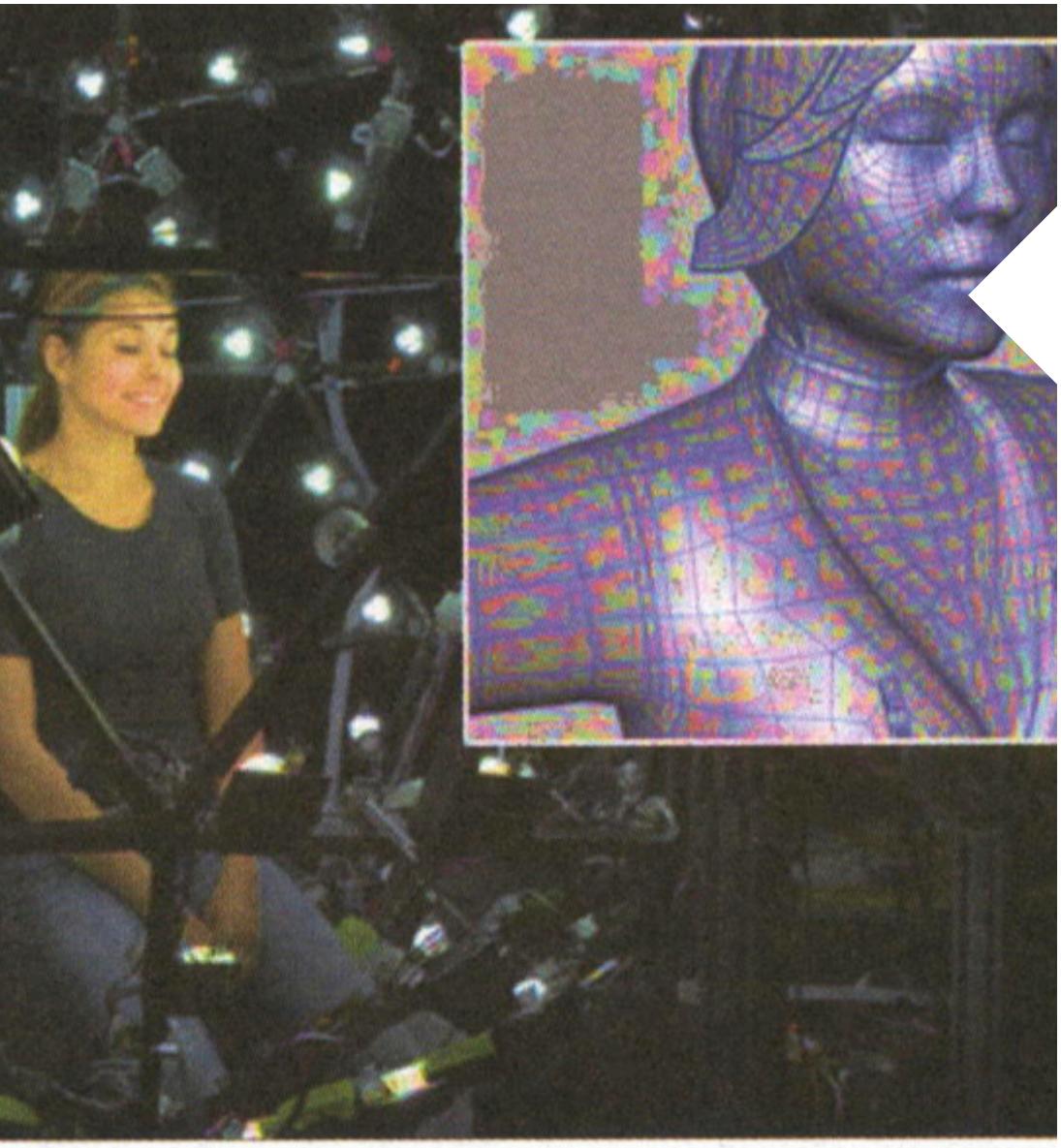
Finally, Ada and Grace can answer questions that middle schoolers might be interested in:

HANDLER: Do you have boyfriends?

ADA: Why? [Tongue in cheek] Is there another virtual human you think we should meet?

GRACE: I hope they're into neural networks and amino acid sequences.

ADA: Grace?! What's wrong with just charming and generous?



Shader for Graphic & Scanned 3D model



Light stage 5

고해상도 안면 스캔 시스템

: LED 조명 156개 + 스테레오 카메라



Hybrid normal map rendering
technique (ICT graphic lab)

사람의 얼굴을 실시간으로 렌더

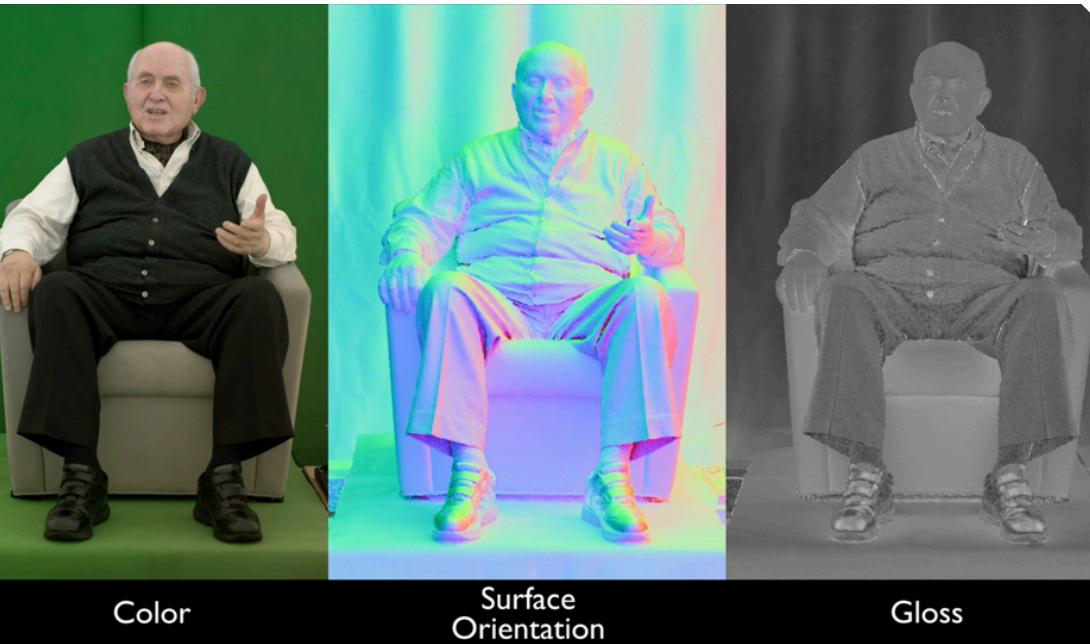


홀로그램으로 만나는 홀로코스트 생존자의 증언

(New Dimension in Testimony)
USC Institute for Creative
Technologies

생존자의 증언을 녹화하여 초실감 홀로
그램으로 전환 : 디지털 콘텐츠화

[영상 자료 : youtube 1' 22"](#)



Scanned 3D model & NLP process



Light stage 기술

: 조명 7개 + 카메라 파나소닉 50대



자연어 처리 편집 / 음성 인식 알고리즘

: 질문과 기존 답변 목록 간

자연스러운 관계

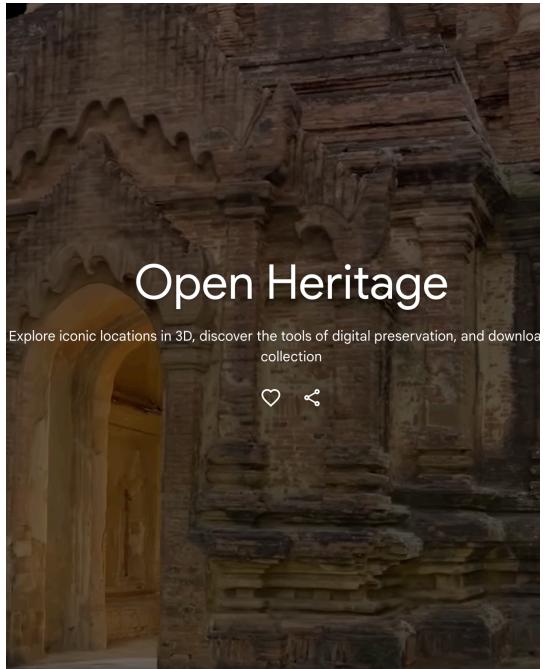


몽생미셸 프로젝트 Mont-Saint-Michel

:문화유산을 위한 AI로 몽생미셸 섬 입체 모형 지도를 이용해 사실적 문화유산 경험 제공.

인류 문화유산 보호 및 홍보활동으로 Microsoft에서 발표한 프로젝트.

[출처 : Using hololens, developed by Microsoft](#)



오픈 헤리티지 프로젝트

[홈페이지 : CyArk Open heritage project](#)

Google Art&Culture CyArk

Go on a journey
From home.

Explore iconic site
from around the
world in 3D.





디지털 아담 Digital Adam

: 툴리오 룸바르도
Metropolitan Museum of Art

[출처 : NYculture](#)

[영상자료 : 복원과정 1' 59"](#)



Because the Night

: Immersive Theatrical experience
셰익스피어 햄릿 기반의 이머시브 연극

가면을 통해 부여되는 익명성
그리고, 가면을 쓰고 무대 위를 누비는
관객들.

[영상 자료 : youtube](#)



Anti-Gone 안티콘

: 2020 선댄스 영화제 뉴프론티어

[출처 : Anti-Gone, Mixed Reality](#)

[영상 자료 : youtube](#)

Reality에 가까워지기 위해 무엇이 필요할까?
디지털의 물성은 무엇일까?

Q & A