Preview of Virtual Reality

VR REVIEW

Virtual Reality Topics

◆ Key Elements for Virtual Reality

가상현실의 핵심 요소

○ Virtual World *가상 세계*

○ Immersion *몰입감*

○ Sensory Feedback *감각 기관*
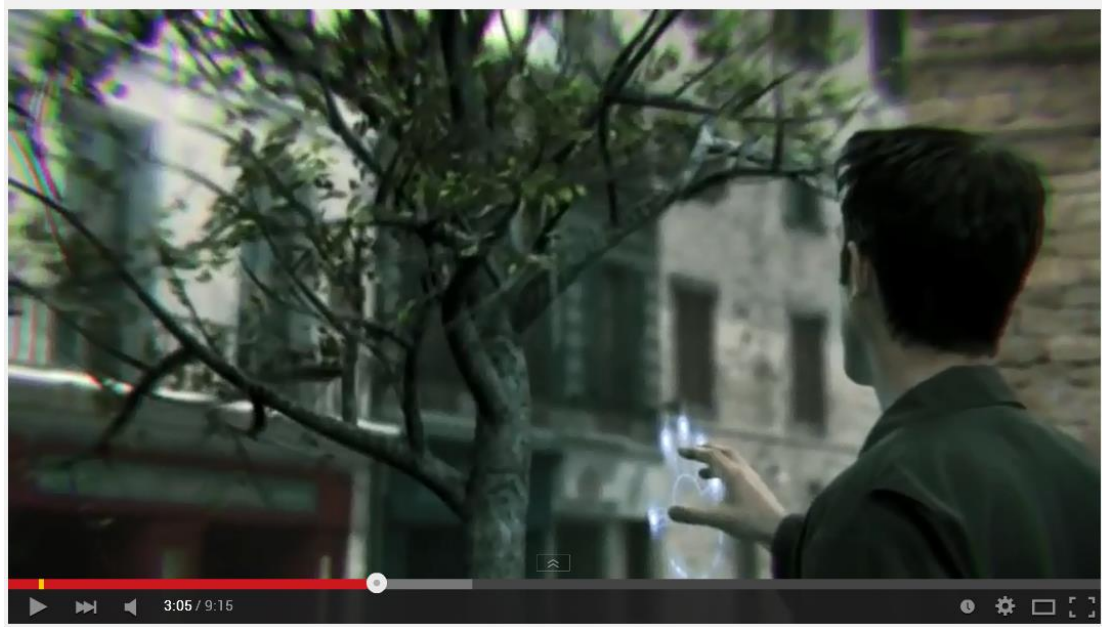
○ Interactivity *상호작용*

◆ Dominant Technologies for Virtual Reality

가상현실에 필요한 기술

○ Tracking Technologies *추적*

○ Display & Graphic Technologies *디스플레이 & 그래픽*

  - Hardware : Display Equipments

  - Software : Computer Graphics
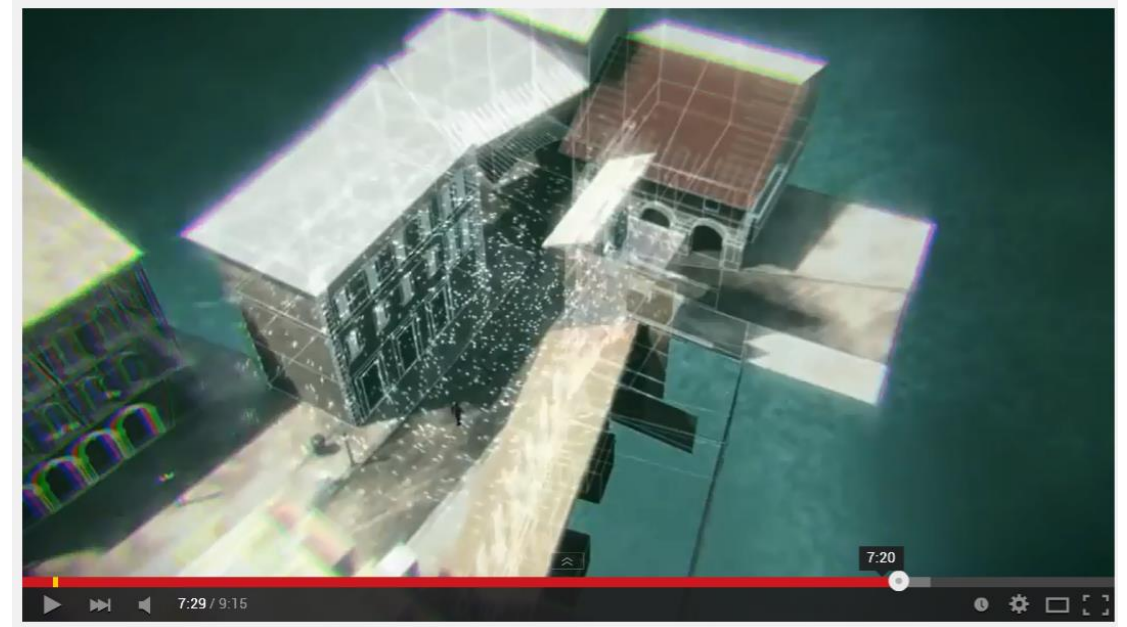
○ Interactive Technologies *상호 작용*

  - Haptic & Others

Introductory Video Clip

♦ YouTube: https://www.youtube.com/watch?v=VzFpg271sm8

○ Title: World Builder

○ Production: Bruce Branit

○ Running Rime: 9 min. 15 sec.

1st Key Elements for VR: Virtual World
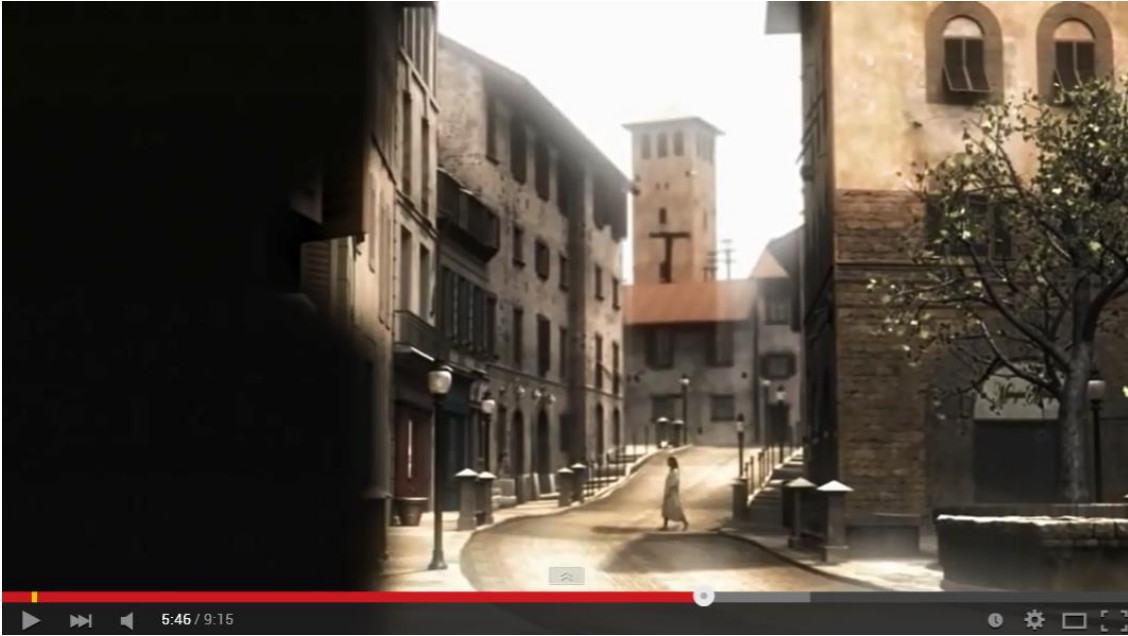
가상 세계

Creation of Virtual World

창조

Destruction of Virtual World

파괴

2ⁿᵈ Key Elements for VR: Immersion
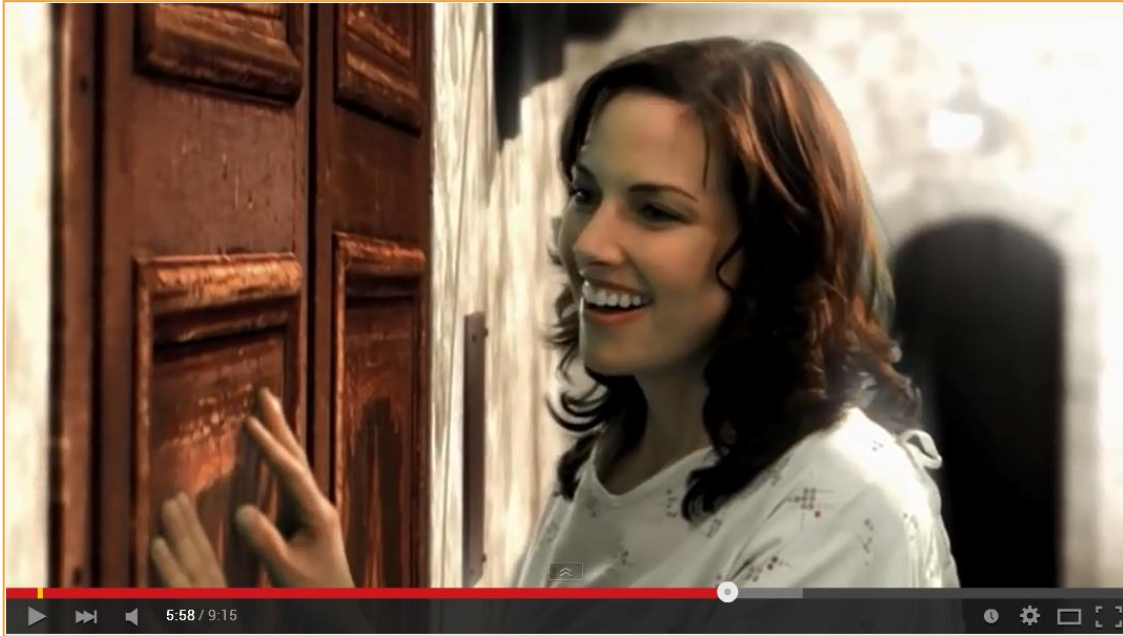
물입감

신체적
**Physical Immersion:
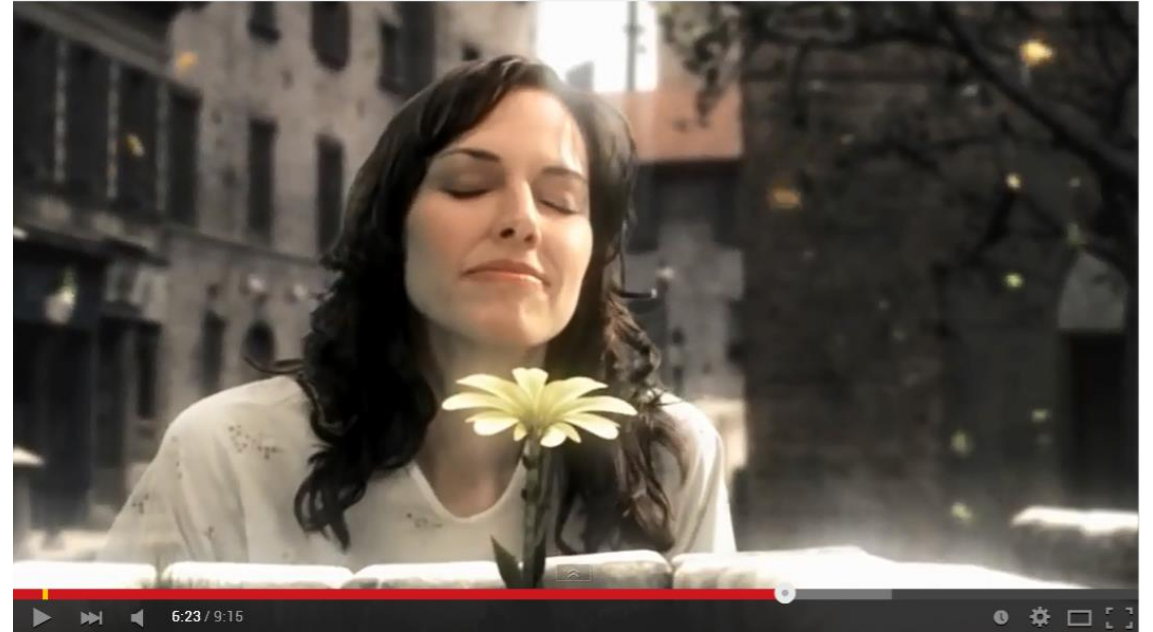Surrounded by Virtual Objects**

정신적
**Mental Immersion:
Involvement**

3rd Key Elements for VR: Sensory Feedback

감각 기관

Human's 5 Senses:
Vision & Touch Sensation

Human's 5 Senses:
Auditory & Olfactory Sensation

4th Key Elements for VR: Interactivity 상호 작용

Respond to user actions
행동에 대한 반응

Move physically within the world
가상세계에서 육체적인 움직임

1st Dominant Technology for VR: Tracking 추적

Tracking Head, Body & Hand
머리, 몸, 손

Eye Detection
눈

2nd Dominant Technology for VR: Display(HW)

디스플레이

Seeing Virtual World & Virtual Objects

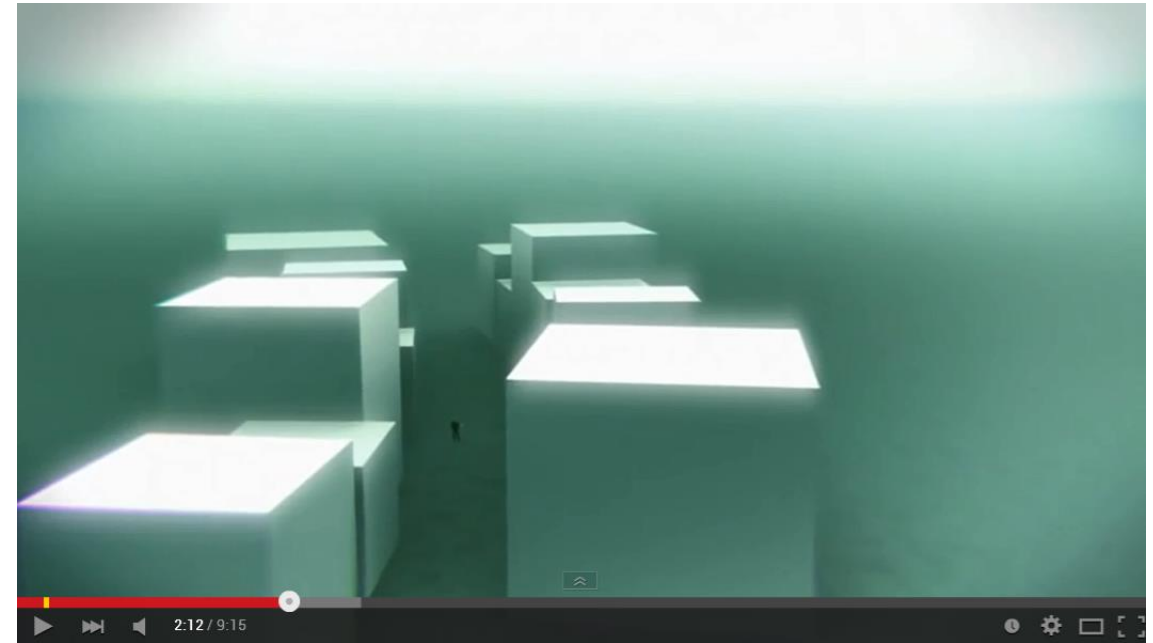가상세계와 가상물체를 보는 것

With Naked Eye?

맨 눈

2ⁿᵈ Dominant Technology for VR: Computer Graphics(SW)

그래픽

Modeling
모델링

Perspective Projection
원근법

2nd Dominant Technology for VR: Computer Graphics(SW)

Shading : Coloring

컬러링

2ⁿᵈ Dominant Technology for VR: Computer Graphics(SW)

Shading : Texture Mapping

텍스쳐 매핑

2nd Dominant Technology for VR: Computer Graphics(SW)
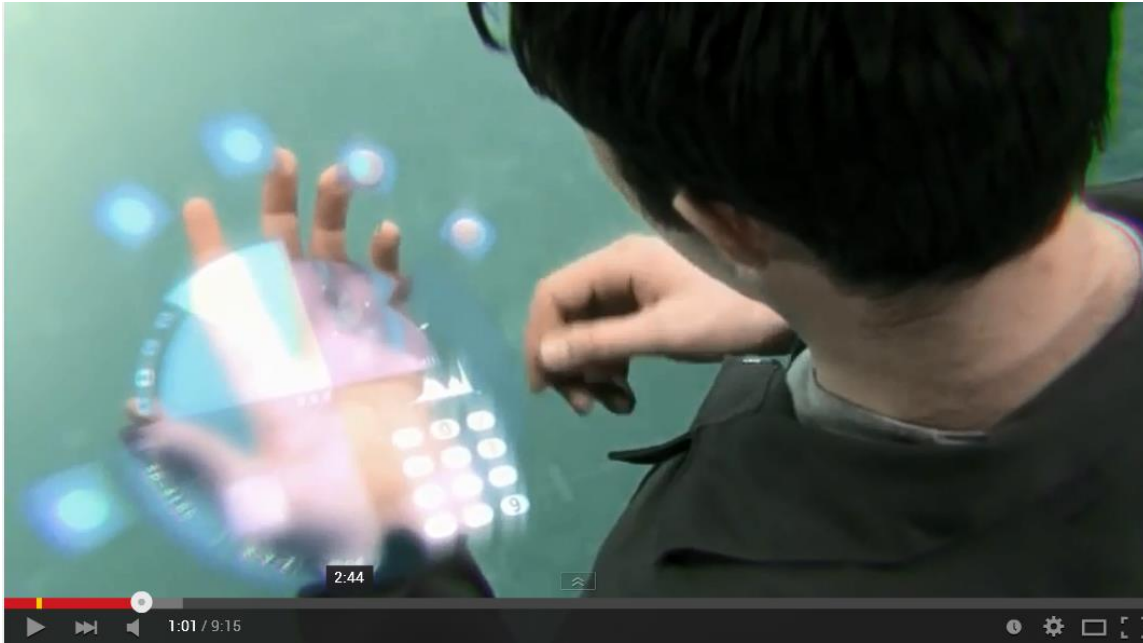

Shading : Applying Lighting Sources

빛

3rd Dominant Technology for VR: Interaction- <u>User</u> Side

상호작용

Interacting with Virtual World & Virtual Objects 가상세계, 가상물체
With Bare Hands? 맨손
Without Any Extraordinary Equipments? 도구

3ʳᵈ Dominant Technology for VR: Interaction- Developer Side

Creating Interactive Virtual World & Virtual Objects
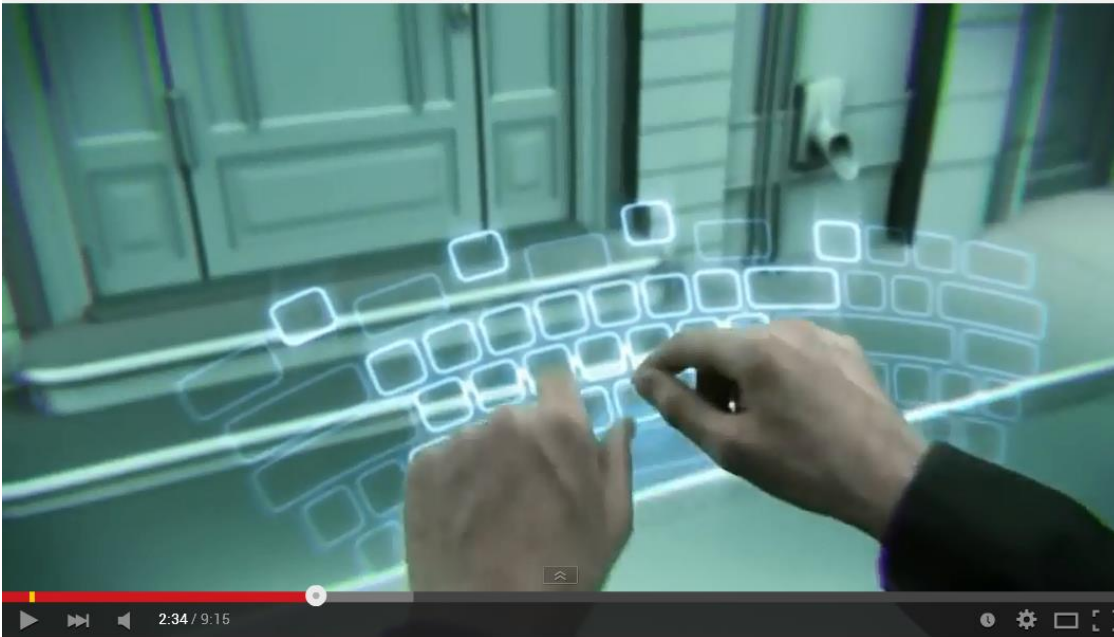**New Tools for Developers**

3rd Dominant Technology for VR: Interaction- Developer Side

Creating Interactive Virtual World & Virtual Objects
New Way of Creating Objects for Developers
새로운 창작법

3rd Dominant Technology for VR: Interaction- Developer Side

Creating Interactive Virtual World & Virtual Objects
New Way of Producing Data for Developers
새로운 데이터 발생법

Questions?