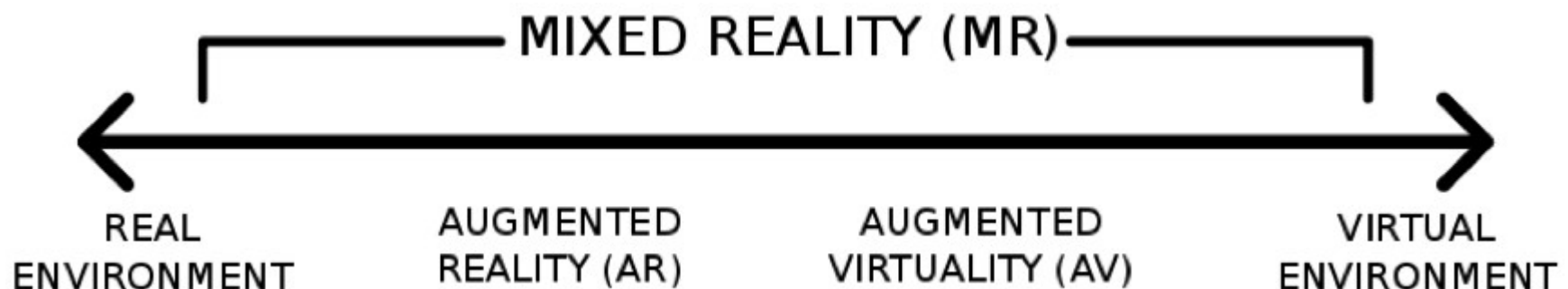


Vizualizace a virtuální realita

DDIT

Mixovaná realita & historie

- 1838 stereoskop (Charles Wheatstone)
- 1929 Link trainer (Edward Link)
- 1950 Sensorama (Morton Heilig)
- 1960 HMD (Morton Heilig)
- 90 léta = rozvoj VR



Milgram (1994)



Link Trainer 1929



Sensorama 1950 (3D projekce, stereo zvuk, ventilátory, čichové stimuly, vibrující židle)



The first HMD 1960

Sword of Damocles 1968



www.vrs.org.uk

Parametry/kritéria

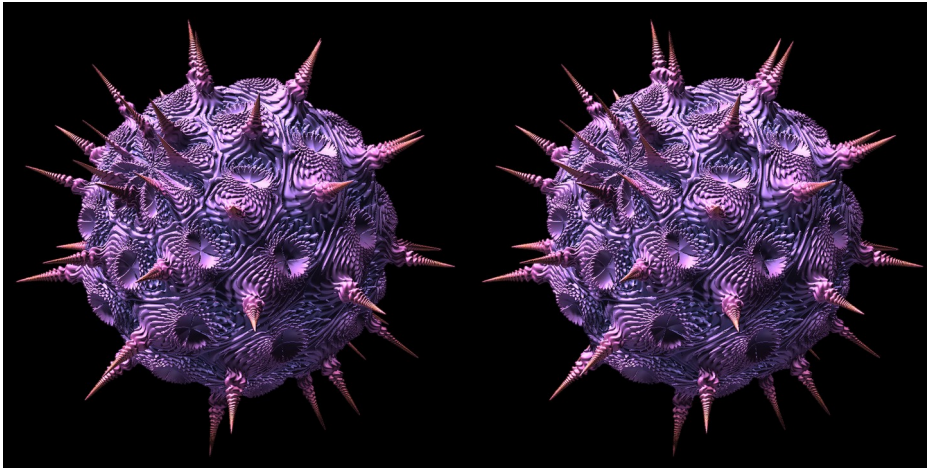
- stupeň imerze
- míra interakce
- možnost kolaborace

Využití smyslů

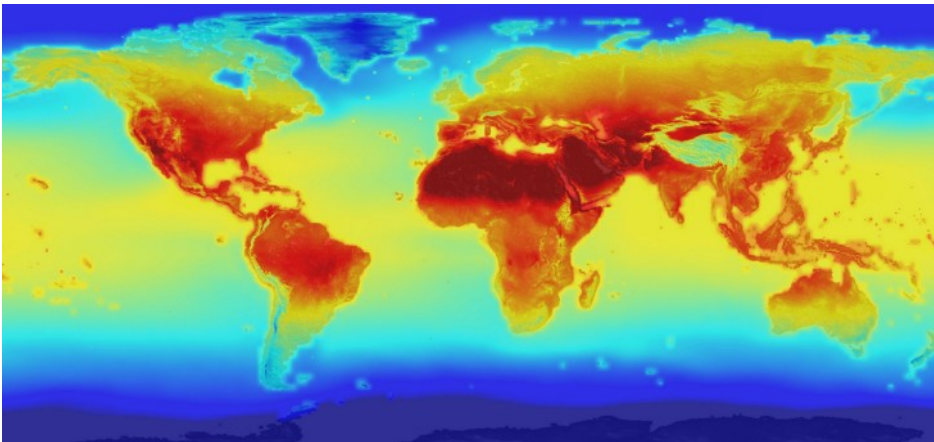
- zrak
- sluch
- hmat
- čich
- chuť (?)



Techniky vizuální prezentace

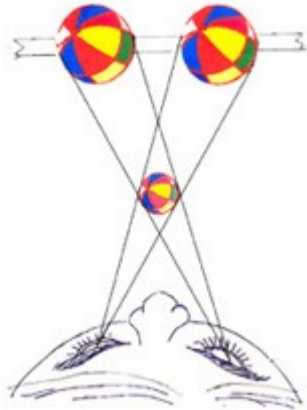


- projekce
- stereoskopie
- vysoké rozlišení

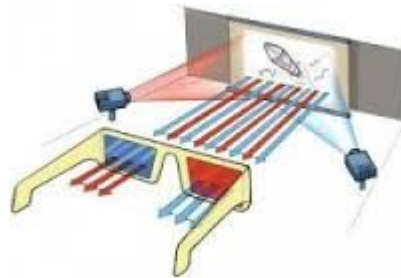


Stereo projekce

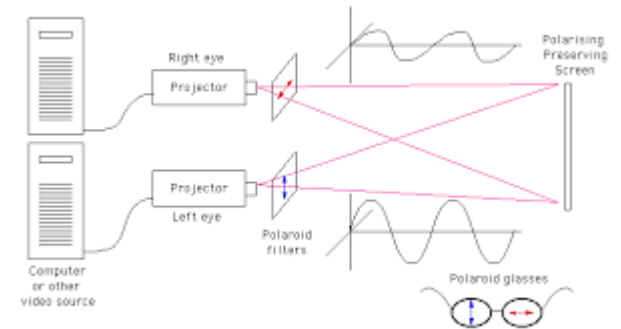
paralaxa



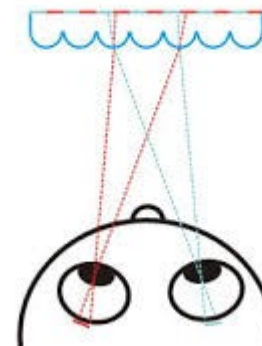
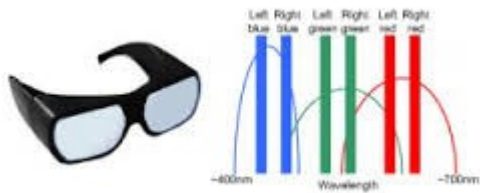
anaglyf



pasivní projekce



infitech



auto stereo display

CAVE Automatic Virtual Environment



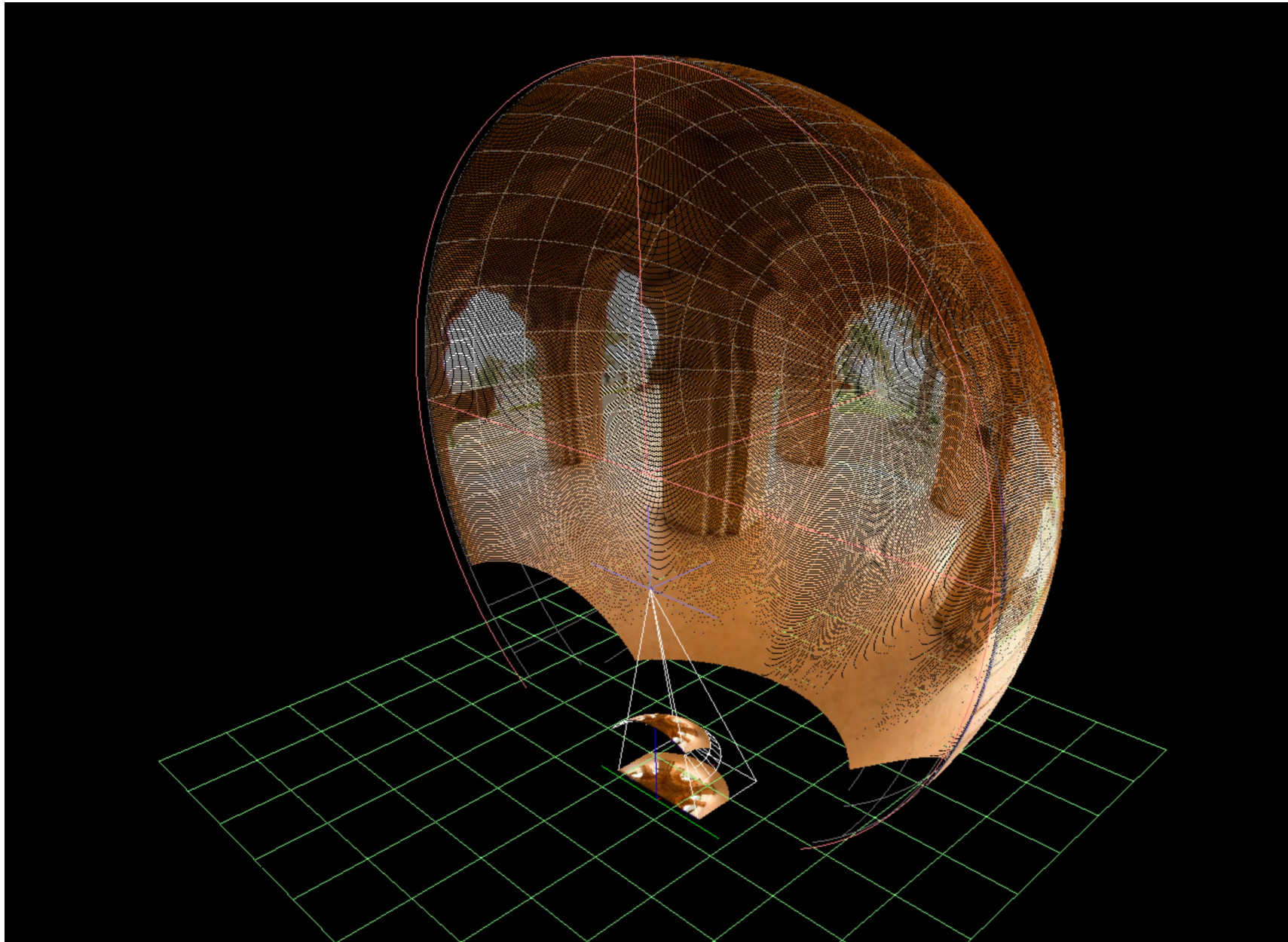
Panorama



Projekt AVIE
iCinema - Center for Interactive
Cinema Research, Sydney

<http://www.icinema.unsw.edu.au/>

iDome



Head Mounted Displays



Oculus Rift

HTC VIVE



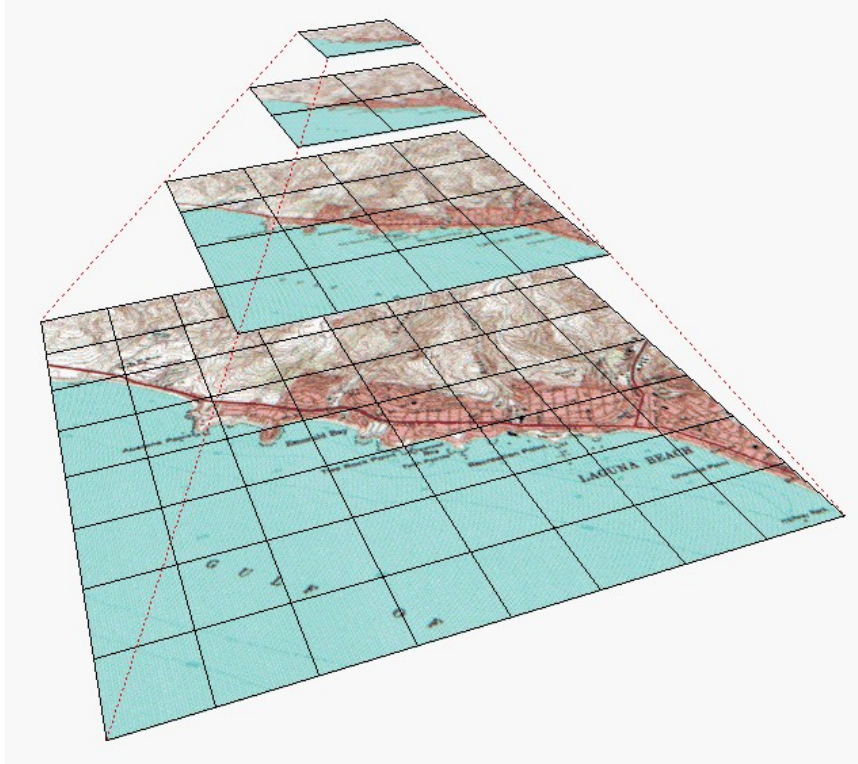
Hololens – Augmented Reality



blogs.windows.com



Multiresolution images



Zobrazení scény
v mnoha úrovních detailu

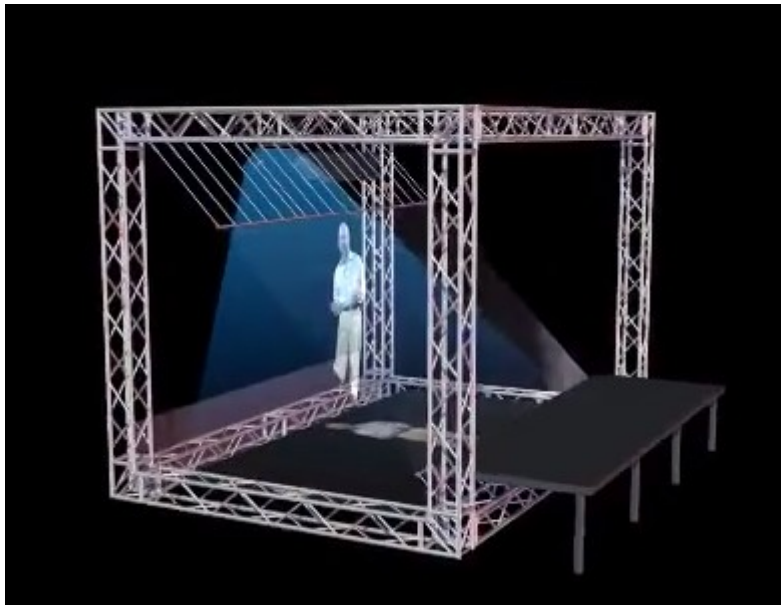
příklad GoogleMaps

<http://www.ai.sri.com/>



Future Fictions 2015 - <http://www.tomorrowsthoughtstoday.com/>

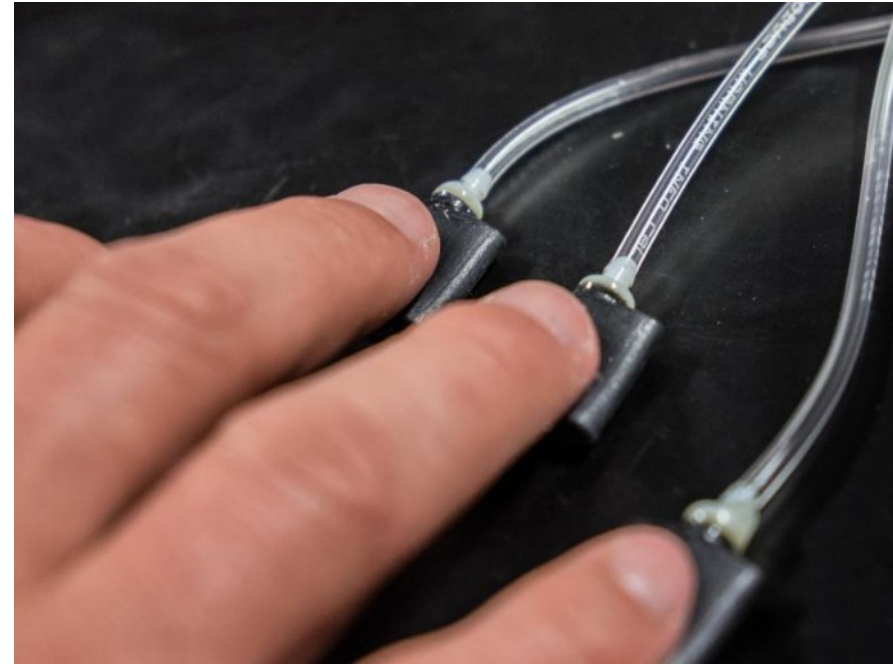
3D Hologram



Hmat



exoskeleton



Čich



<http://spectrum.ieee.org/>

Nosulus Rift

<http://nosulusrift.ubisoft.com/>



Interakce

příští dvě přednášky

Distribuovaná VR

- sdílení vjemu
- vzájemná komunikace a interakce
- **kolaborativní prostředí**

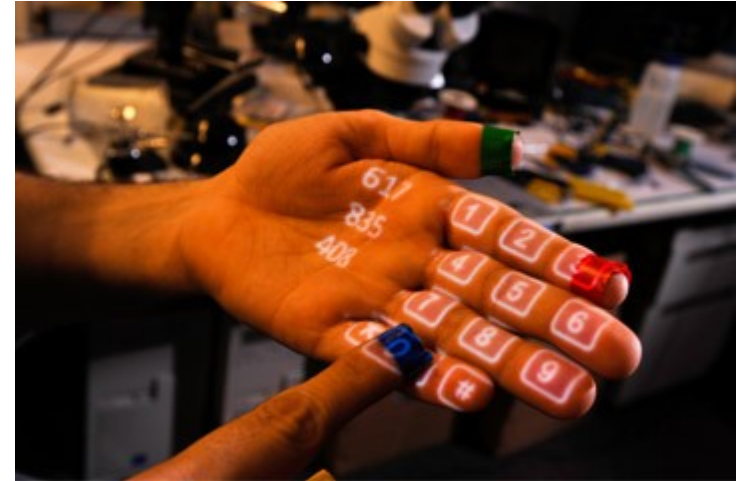


<http://www.virtualrealityreviewer.com/>

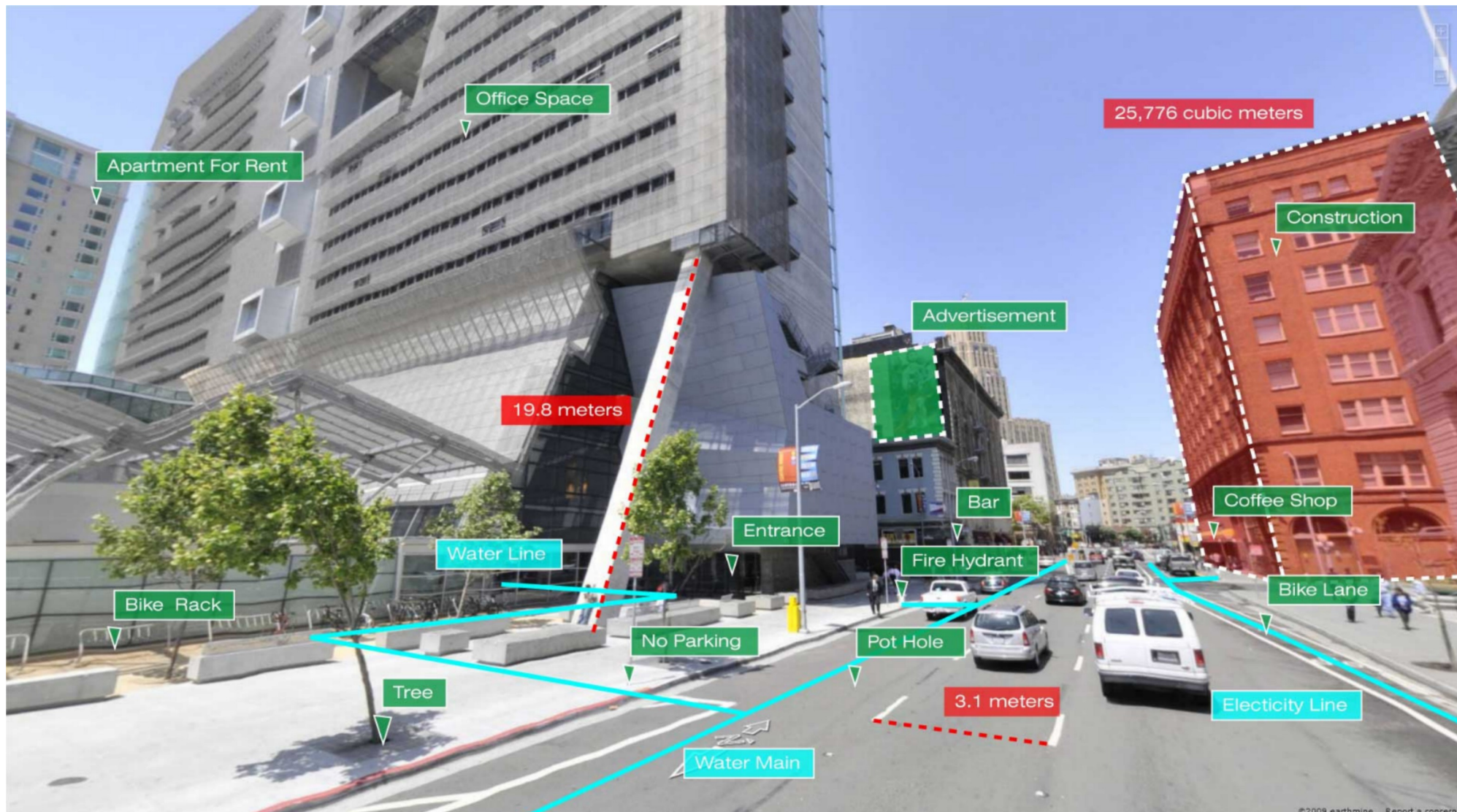


<http://en.sjtu.edu.cn/>

Aplikace



Aplikace



Aplikace

