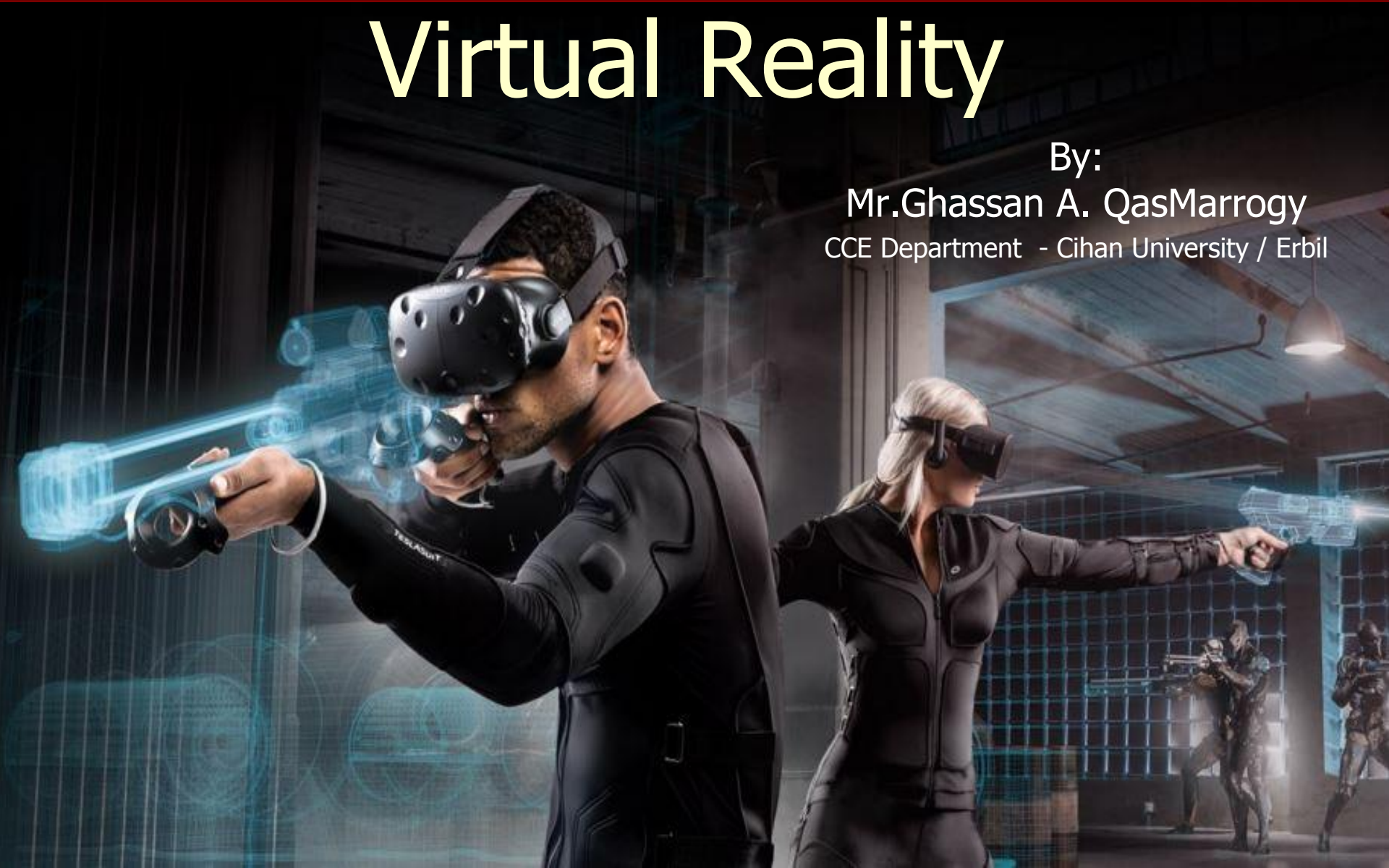


Virtual Reality

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Overview

- What is VR
- Techniques of VR
- History of VR
- Uses of VR
- Future Possibilities
- Conclusions
- Sources

What is VR

- Virtual Reality is defined as:
 - Simulated environment (computer?)
 - Interaction with human senses
 - Reactive to input from person
- What can be VR
 - Just about any simulated environment

Better example of what VR is...
(just follow along... trust him)

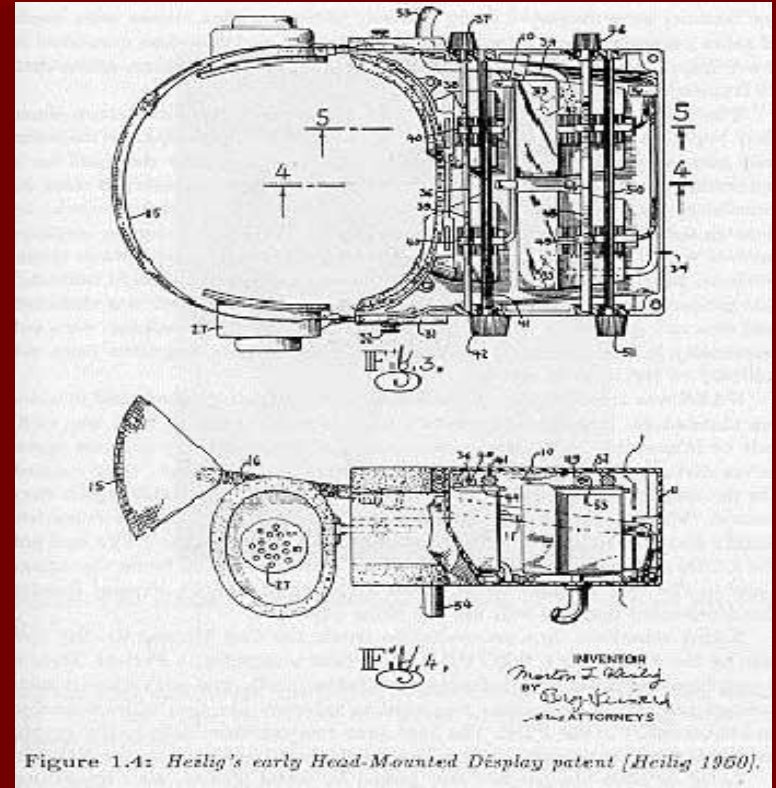


Techniques of VR

- Types of VR
 - Glasses
 - Personal mobile suits
 - Head mounted screens
 - Tracking/Non-Tracking
 - Motion Capturing
 - Fully enclosed systems

History of VR

- Morton Heilig
 - Not in computers!
 - Surround sound idea for the eyes...
- "...why use 18% of the viewer's field of vision in 2D, when we can use 100% in 3D..."



Further advances

- Faster image generation systems
 - Realtime wireframe drawing
- Real world input/output...
 - Enables interactivity
 - 3D position sensors...

VR as we know it

Now, we have VR in the same form as today.

Computer systems with reactive capabilities generate simulations of any environment.

Uses of VR

- Late 1960's (the main players in history)
 - Military
 - NASA
- Took Sutherland's ideas and advanced them to use in flight simulations.
 - That cool headgear returns!

Neat things VR is used for today

- Phobias

- Fear of Heights, Flying, Spiders, Public Speaking, Driving...etc

- Physical Therapy

- Education

- Training
 - Military
 - Microsoft flight sim?
 - Scholarly
 - Medical
 - Construction
 - Law Enforcement
 - Lots more....

Future of VR?

- Future only bound by technological advance
 - Nanotechnology?
 - Implants?
- U. Washington already researching:
 - Retina image screening
 - Nervous system implanting (EEG and EMG)
- Unmanned Flight

Conclusion and Summary

- VR came about as an idea from a cinematographer named Morton Heilig in 1960
- Ivan Sutherland continued when Heilig ran out of money (doh)
- Military liked Sutherland's idea and helped him develop it. (around 1966)
- NASA really liked it, poured in tons of money. (late 60's / early 70's)

- What is VR?
 - Just about any simulated environment a user can actively experience
- Terminator-esque future?

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