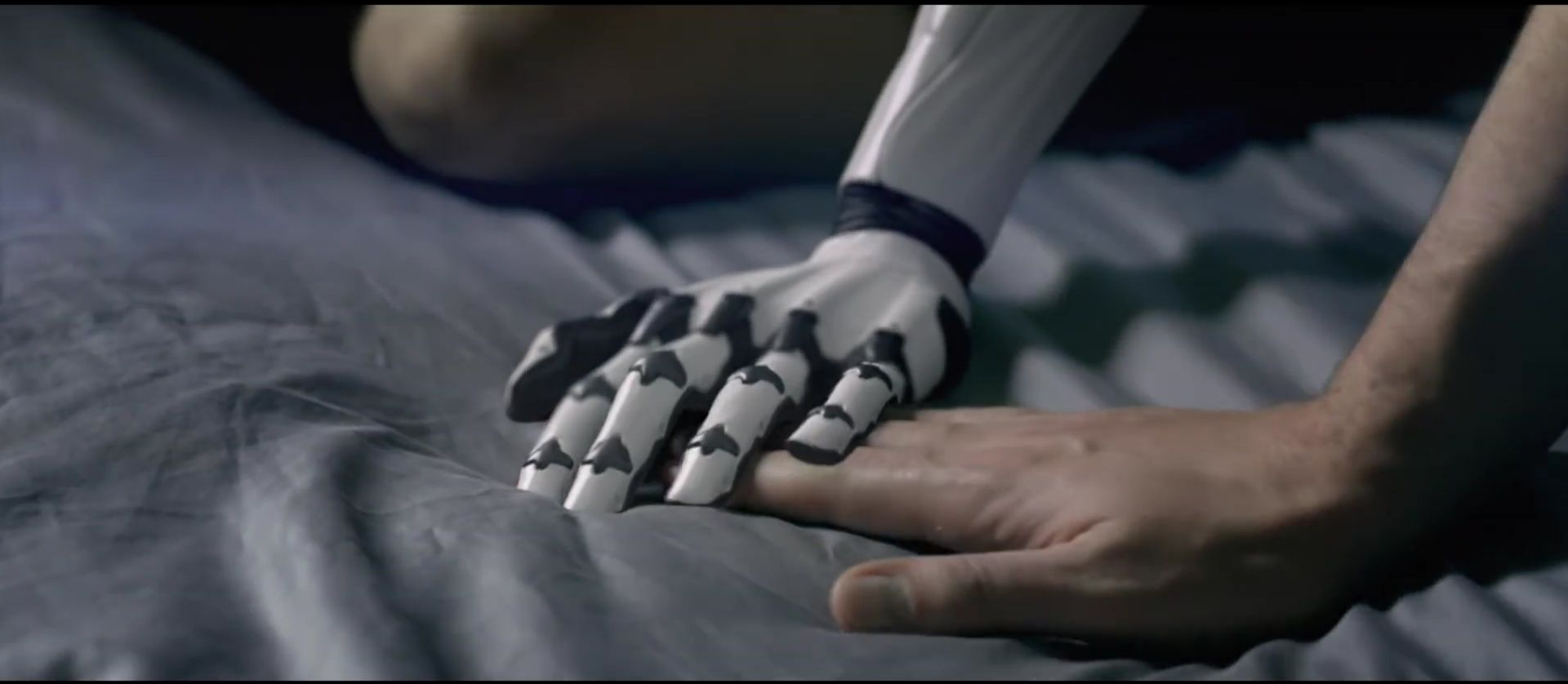
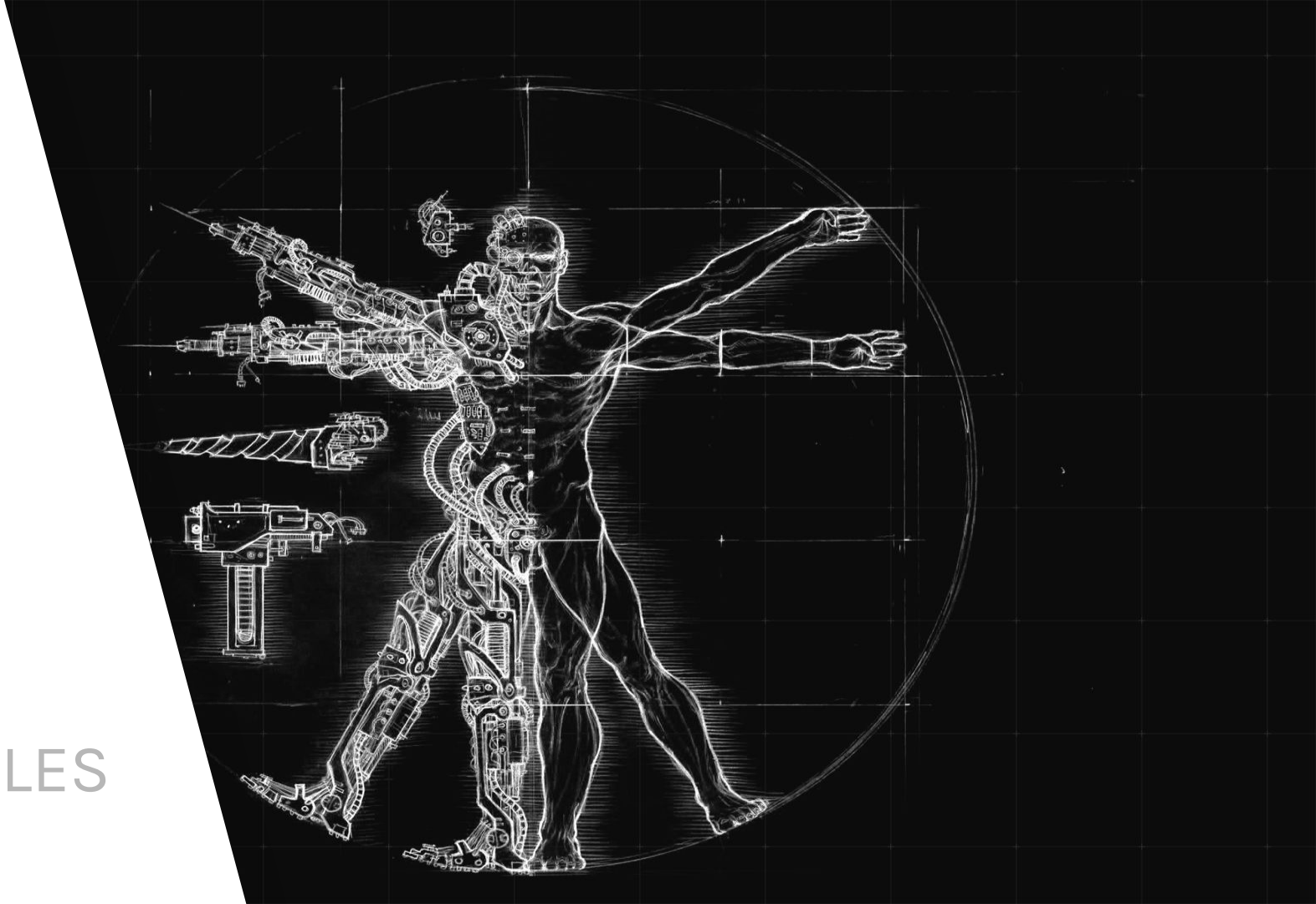


THE AUGMENTED FUTURE



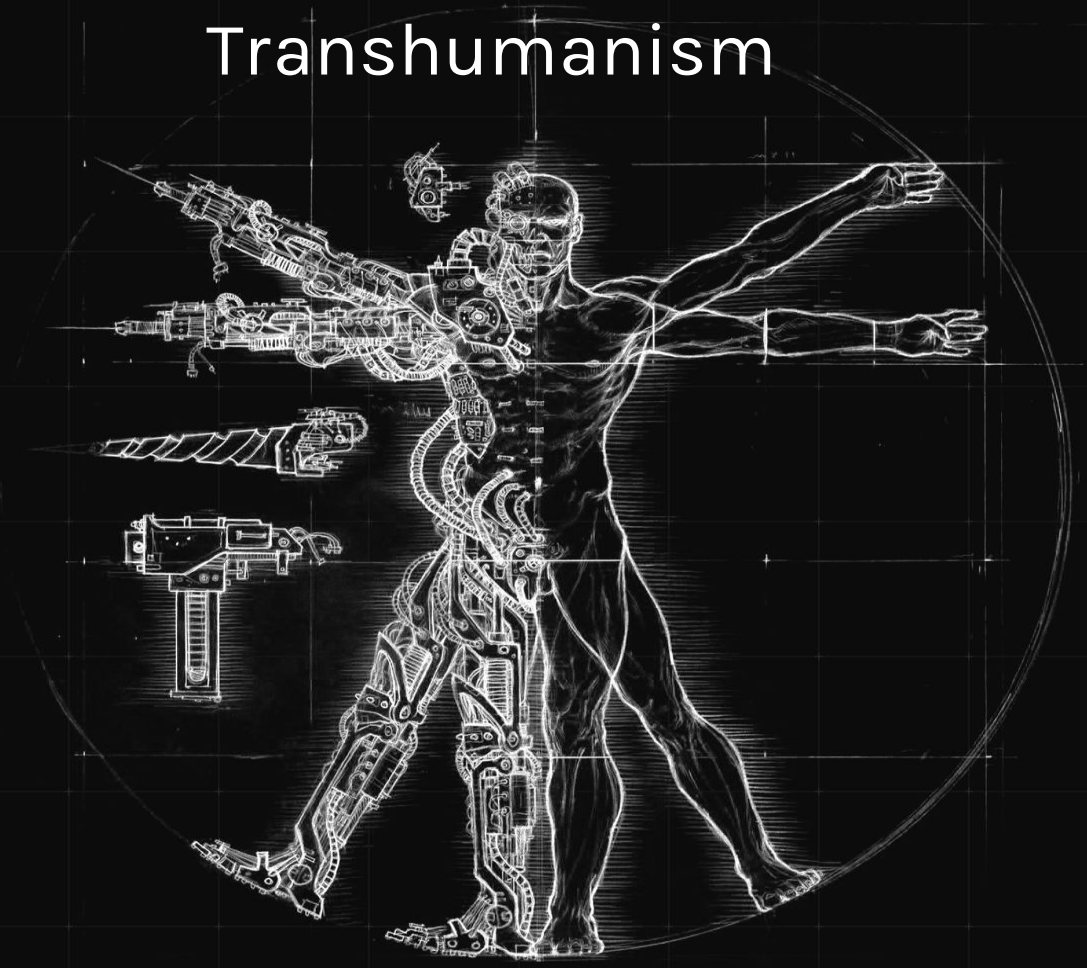
PRINCIPLES

Transhumanism

Rejection of *hubris*

Extension of human-potential to become

Continuation and acceleration of the evolution of intelligent life by rational means



Biology altered at will

Open discussion of future

TODAY’S WORLD

AIMEE MULLINS

CHEETAH LEGS

JAMES YOUNG

‘FUTURISTIC’ ARMS

TALOS

EXOSKELETON SUIT

CASE STUDY

MODULAR PROSTHETIC ARM


MOTHERBOARD

MELISSA LOOMIS

- Attacked by raccoon
- Had to amputate arm due to raccoon virus

GROUNDBREAKING SURGERY

- Underwent 2 surgeries- target muscle reinnervation (TMR) and target sensory reinnervation (TSR)

- Help her move and feel her prosthetic arm

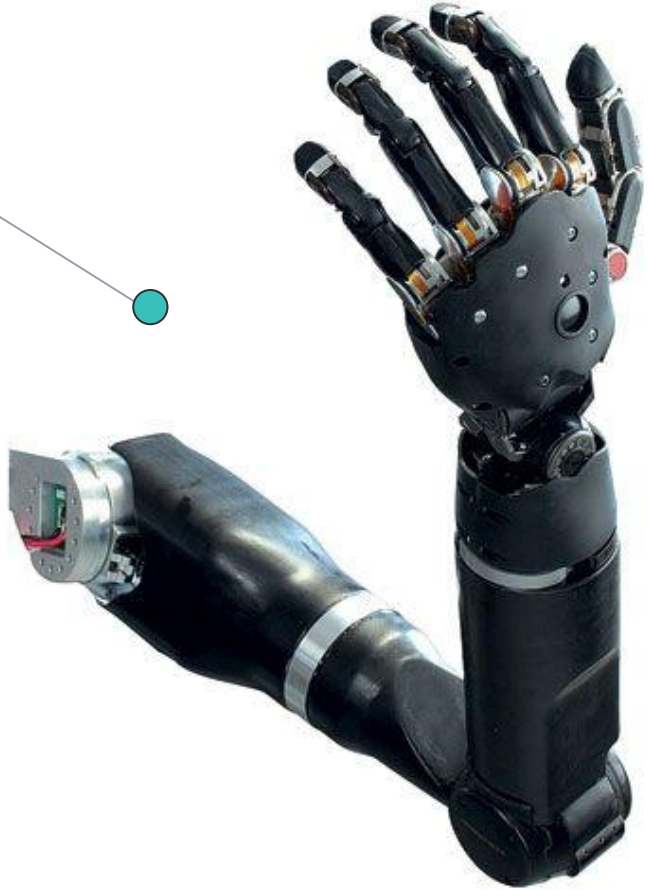
Modular Prosthetic Limb

funded by **DARPA**

One of the world's most advanced bionic limb

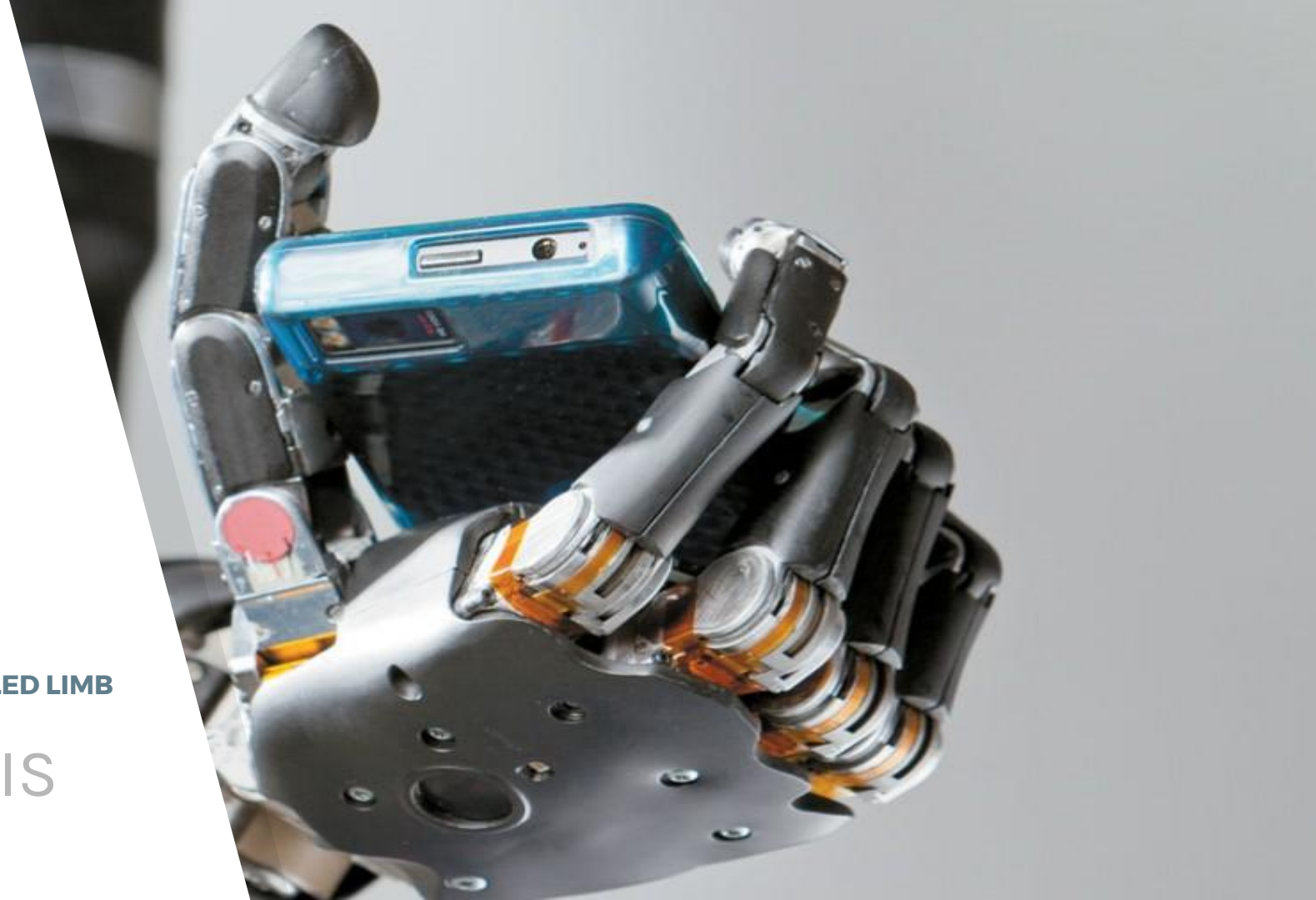
With TSR, individual nerve responsible for touch from her hand is remapped to the limb via electrodes

Melissa - one of the world's first amputees able to **feel** with robotic prosthetic



Used to suffer from phantom limb pain - now still feels sensation but no discomfort

Over 100 contact and temperature sensors in limb- Able to feel sensation and temperature feedback



MIND-CONTROLLED LIMB

ANALYSIS

“

This is completely **revolutionizing** how humans interact with machines

-MOTHERBOARD

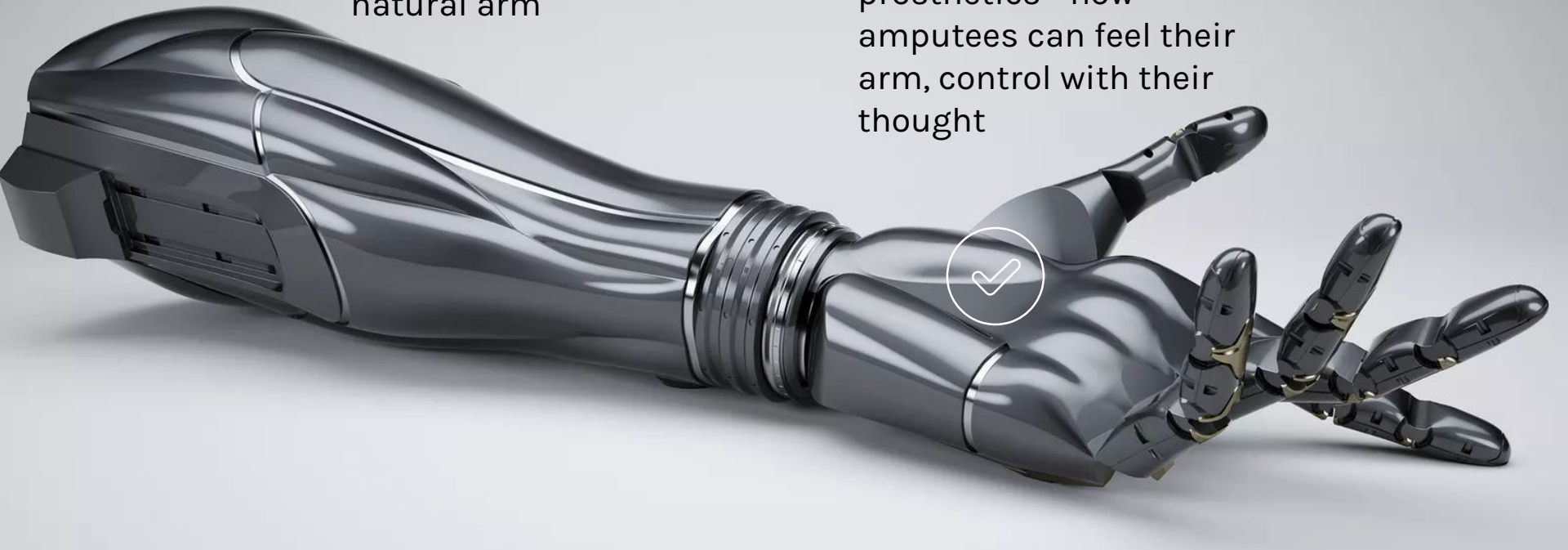
Revolutionary

State-of-the-art -

The dexterity closest to natural arm

No longer just aesthetic

Makes a difference in prosthetics - now amputees can feel their arm, control with their thought



EVER EVOLVING

OSSEO-INTEGRATION

NEGATIVES

Still new

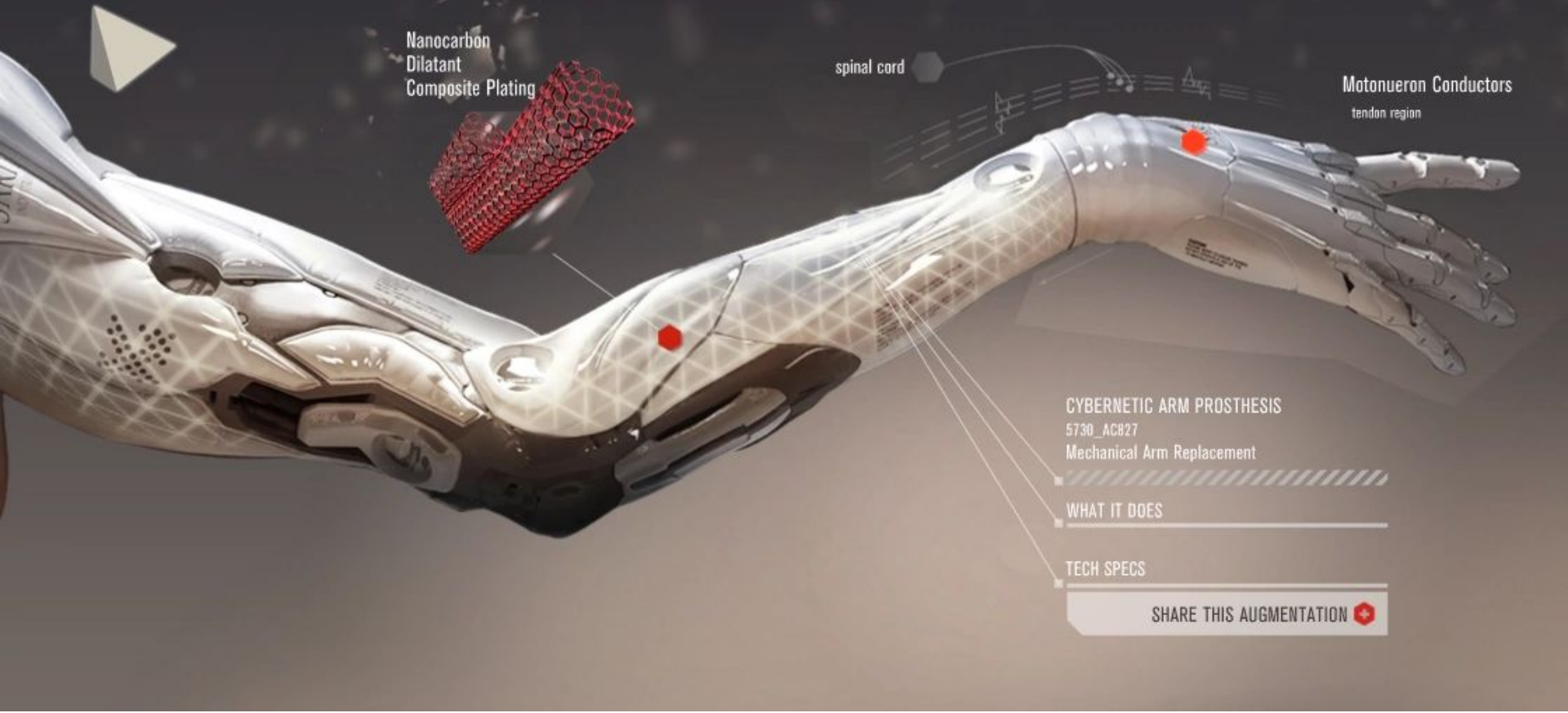
Not powerful enough to replace a normal hand yet- lack feel of textures, unable to pick heavy items

Require great concentration to move

A few

100,000s $

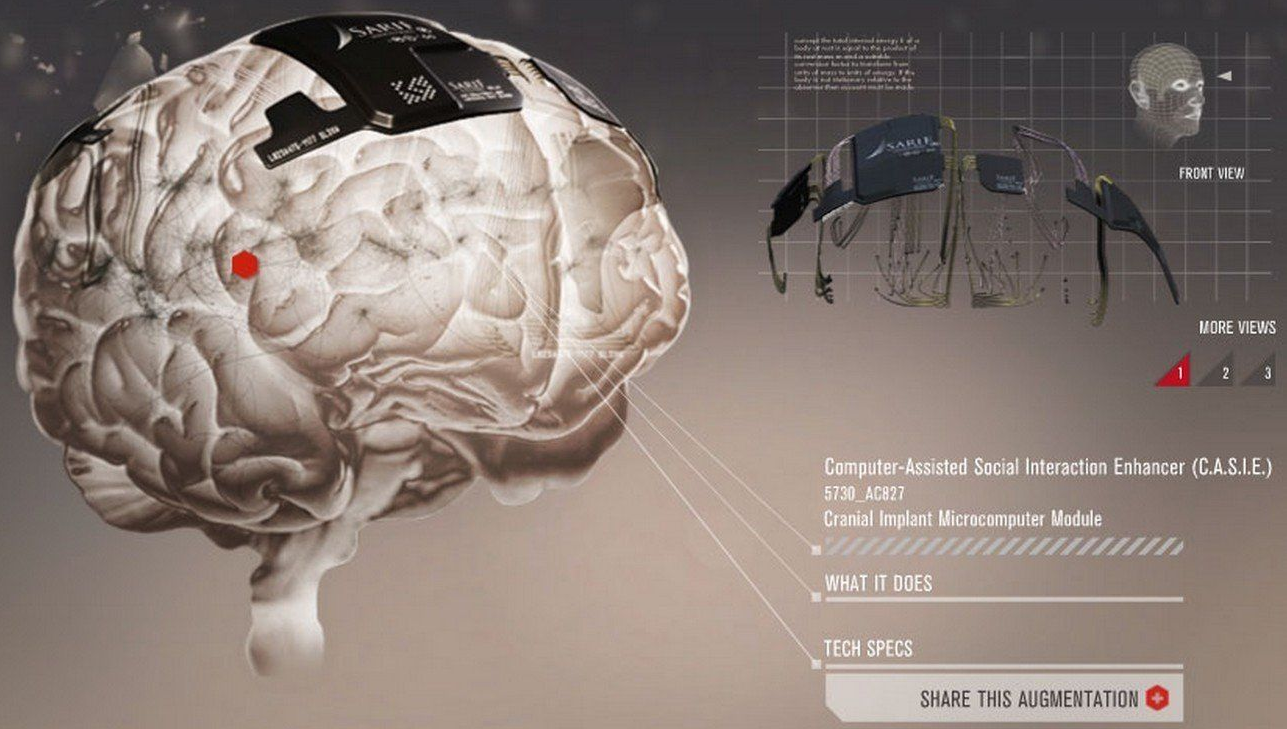
Huge sum of money



LOOKING FORWARD

BRAIN-COMPUTER INTERFACES

PAVES THE WAY



END TO DISABILITY

Restoring function in disabled people, readily moving prosthetics with brain

> > >

Augmenting humans beyond natural capacity

EARLY DAYS

BCIs are slower, less precise/complex than normal humans

Integrating brain with wires- damaging to tissues

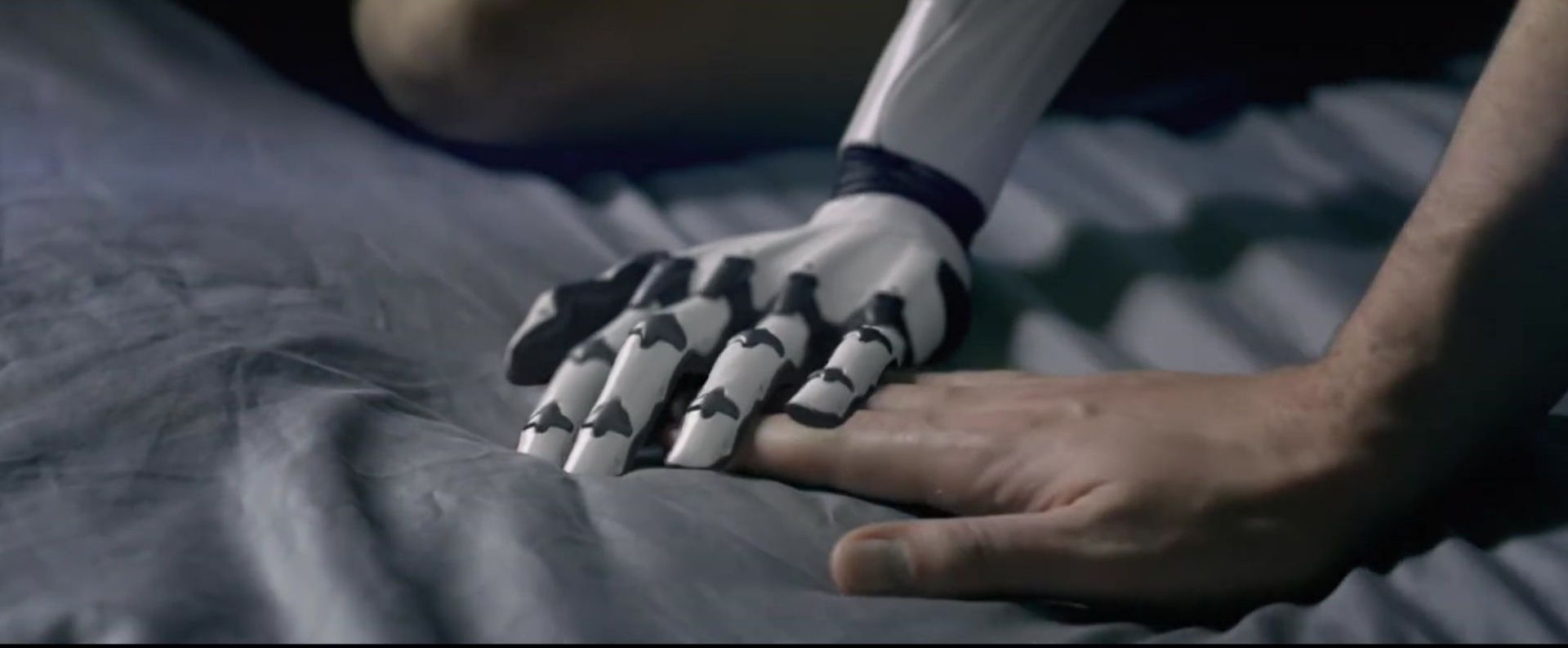
Communication with technology via BCI requires great concentration

THE PROMISE

End to physical disabilities

Bionics replacing lost eyes, ears, and limbs

Prospect of enhancing the able-bodied with super-human strength, speed, and stamina



FAR FUTURE


TRENDY?

Prosthetics are preferred

Pressure to replace limbs for enhanced bionic replacements

Wish fulfilment

DANGER

Narrow a person’s prospect

Might promote success
> serious disability
(e.g. doping)

FAR FUTURE

How far is too far?


WELCOME TO SARIF INDUSTRIES
WE PLAY GOD
BE HUMAN
REMAIN HUMAN
PURITY
first

SOCIETAL IMPACT

Access to the rich?
Inequality?

MILITARY DEVELOPMENT

Wrong hands?

CONCLUSION

Does transhumanism offer a stark choice of

evolve or perish?