

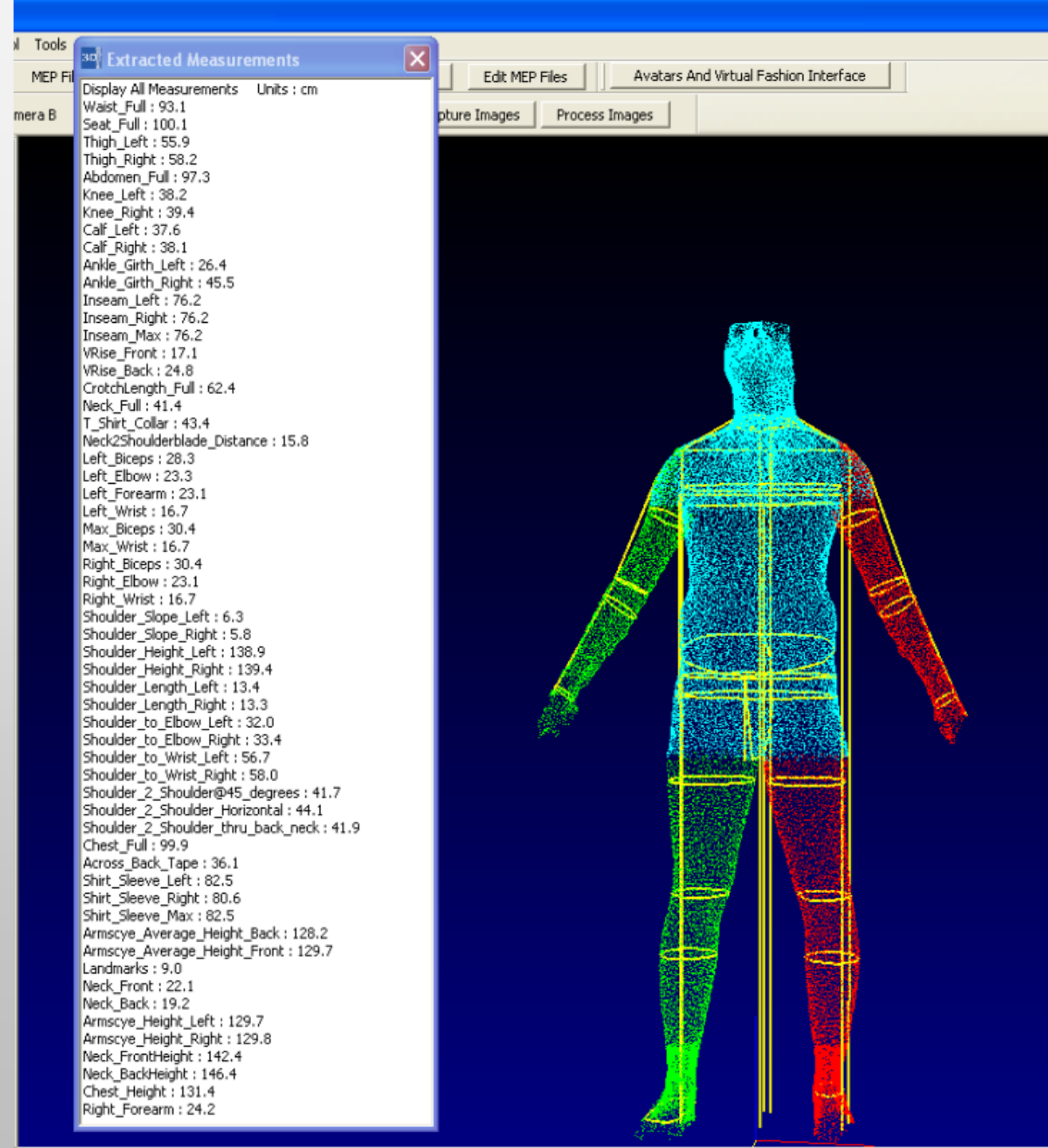
Avatars and Motion Capture for Virtual Fit Fashion

Andrew Brownridge

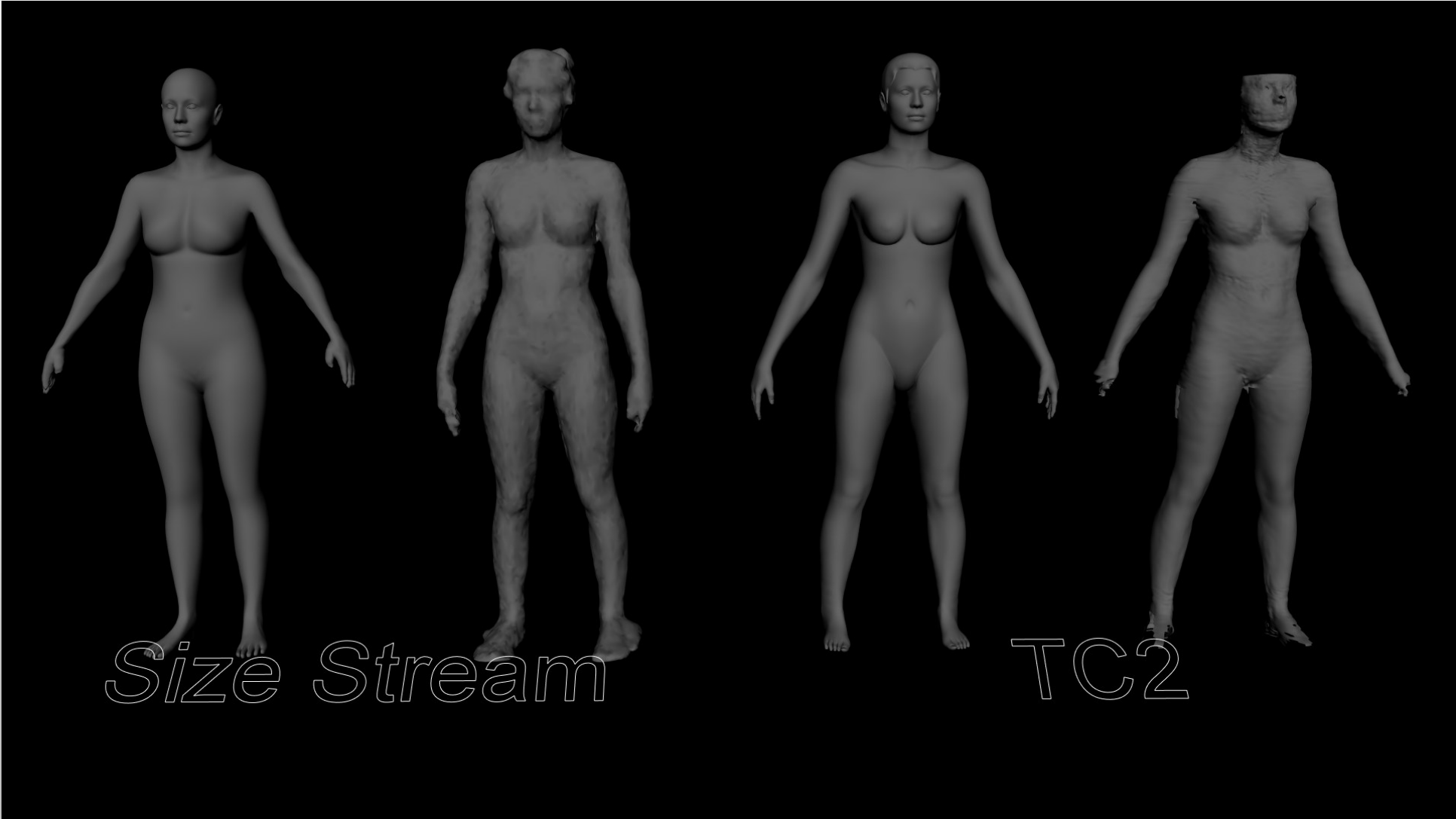
Anthony Bukowski

Body Scanning

- Infrared depth sensing
- Takes less than 10 seconds
- Produces point cloud data
- List of body measurements
- Used for
 - Body shape analysis
 - Clothing size standards
 - Product development
 - Made-to-measure clothing
- Scaled pre-made avatars

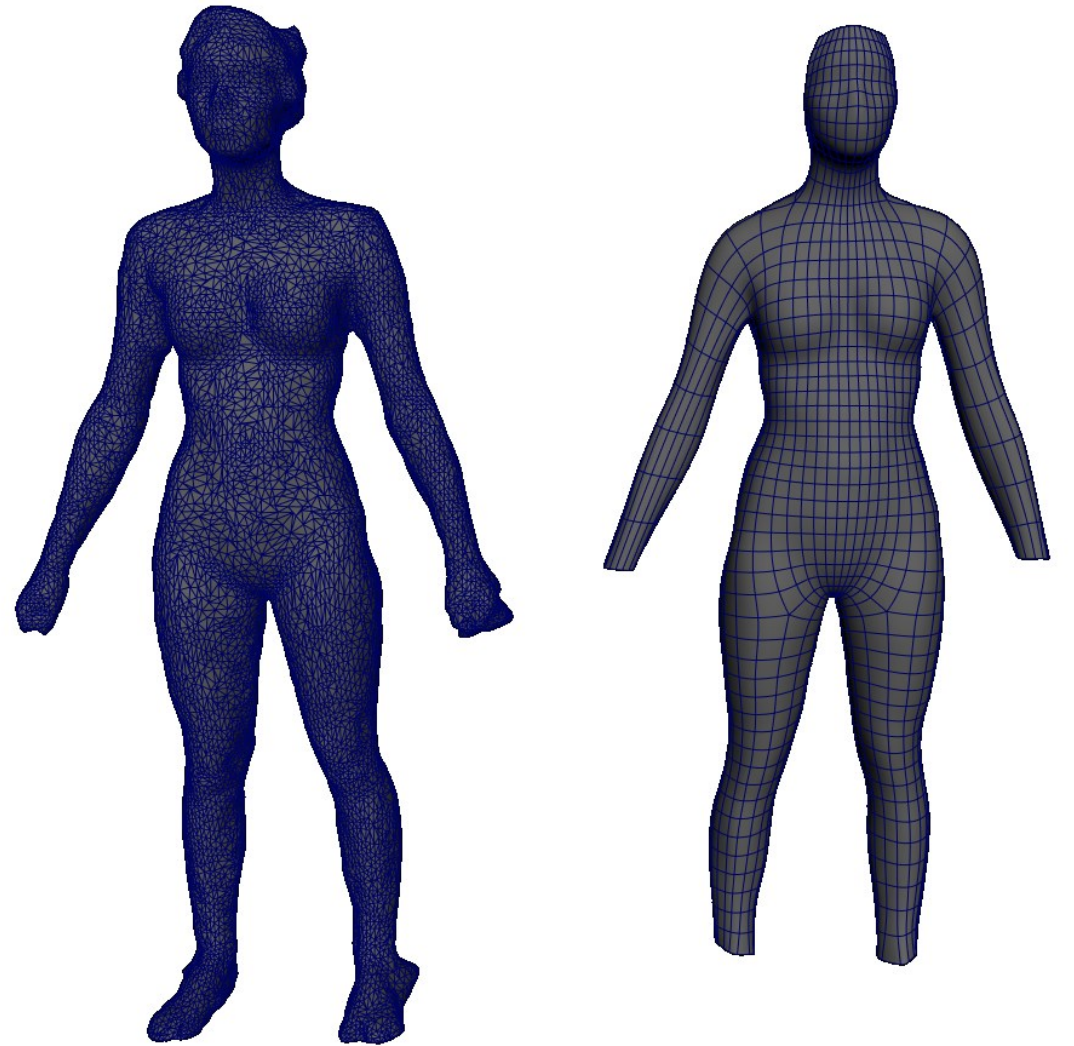


Accuracy of Representation



Topology for Animation

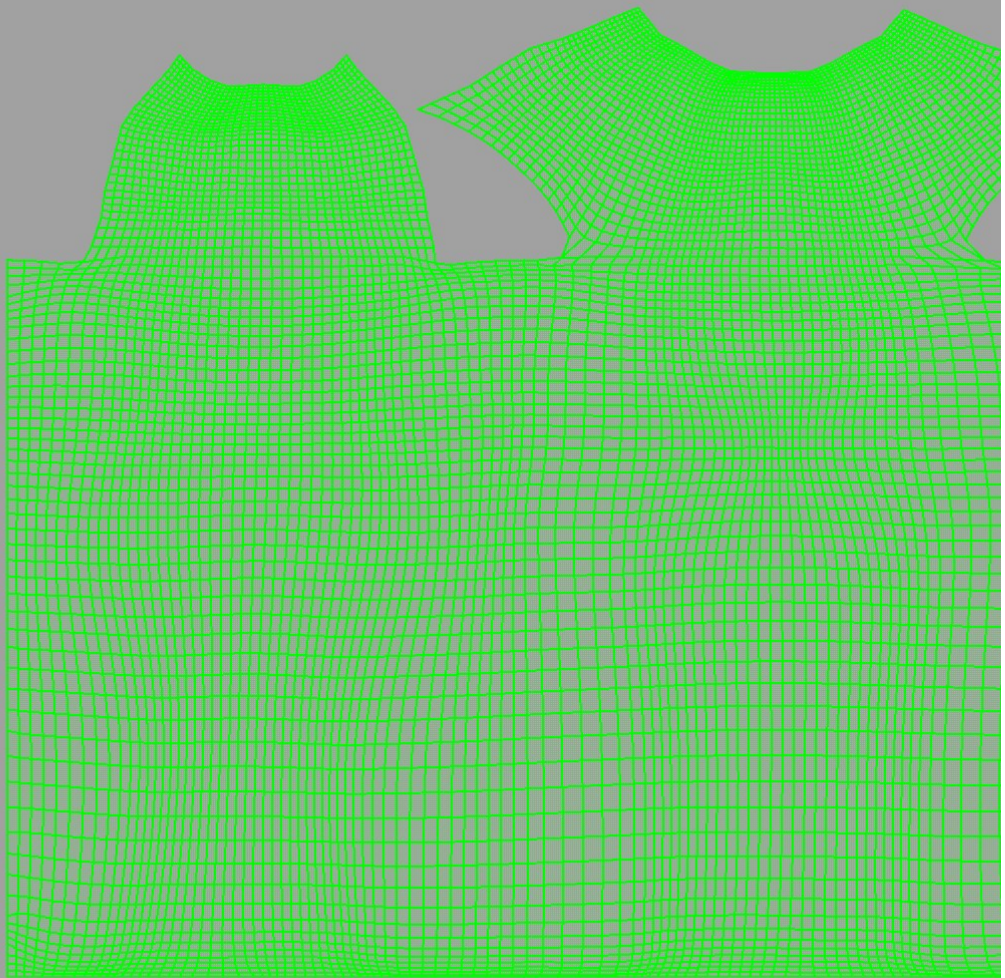
- Anatomy of 3D polygonal models
 - Vertices
 - Edges
 - Faces
- Define the deformation when animating
- Reconstruction of point cloud data is noisy and unusable
- Retopology tools available
- Use scan data as 'live object'
- Enables control over topology whilst being true to surface capture



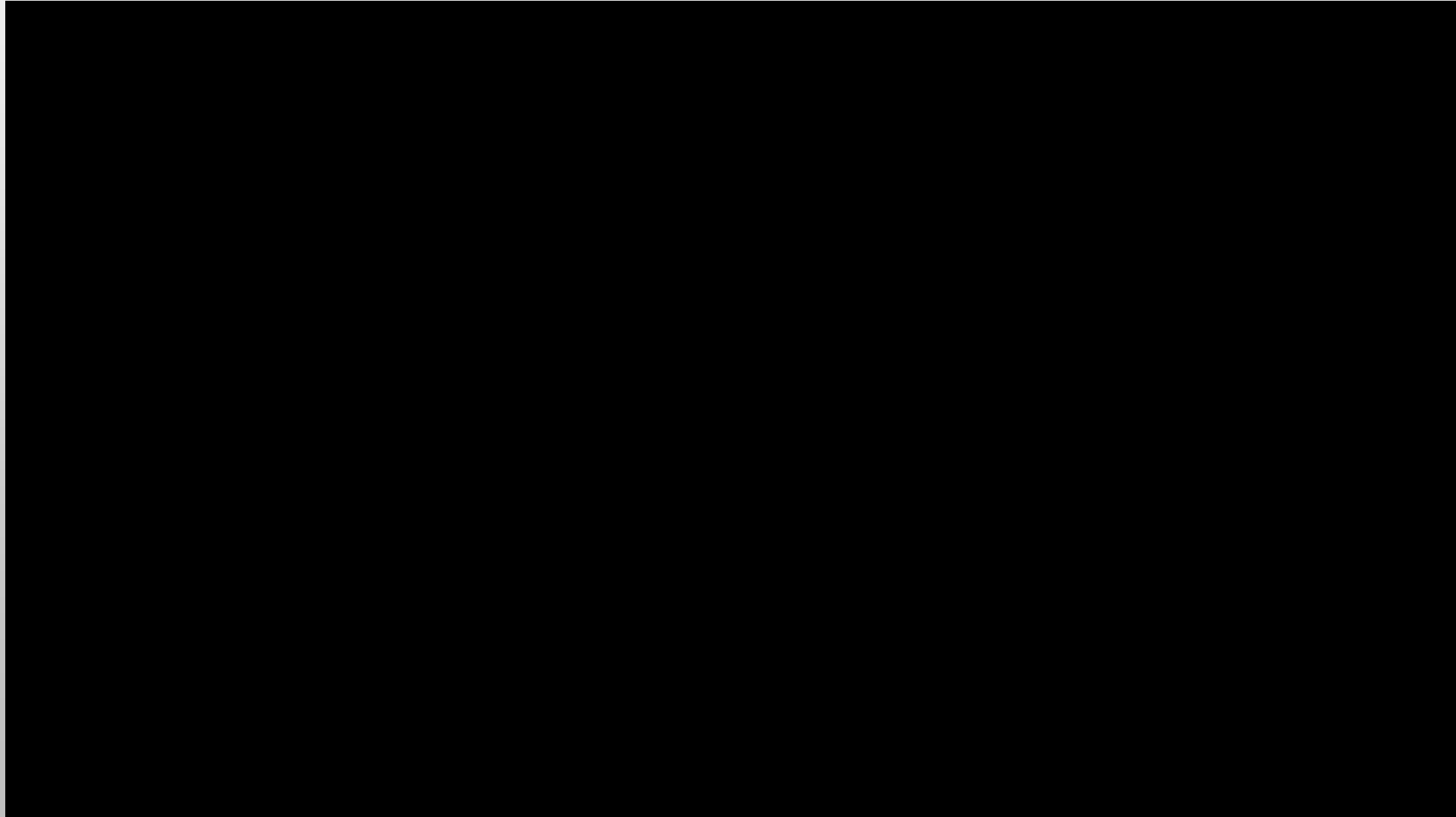
Body Texturing



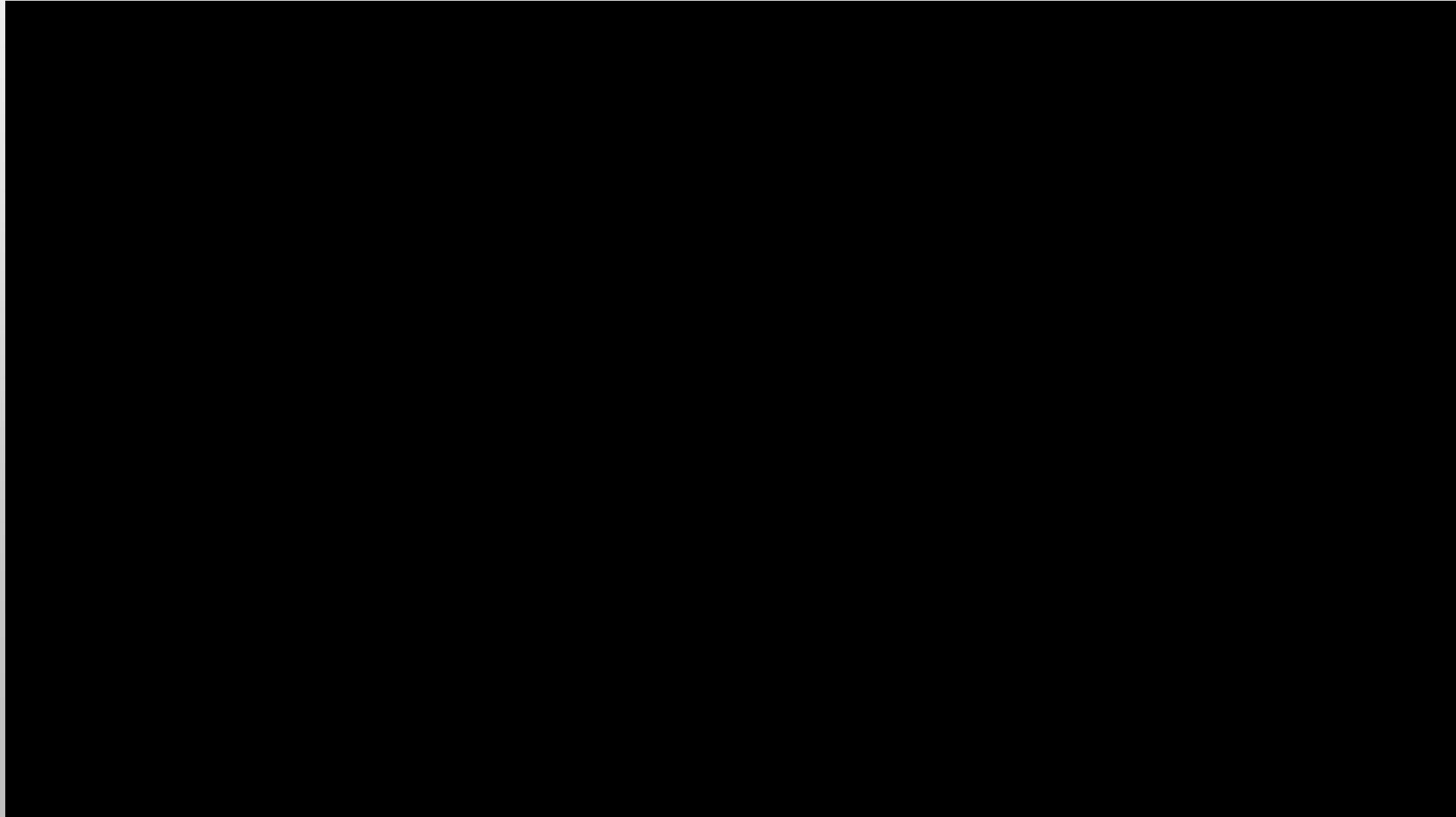
Cloth Texturing



Cloth Simulation

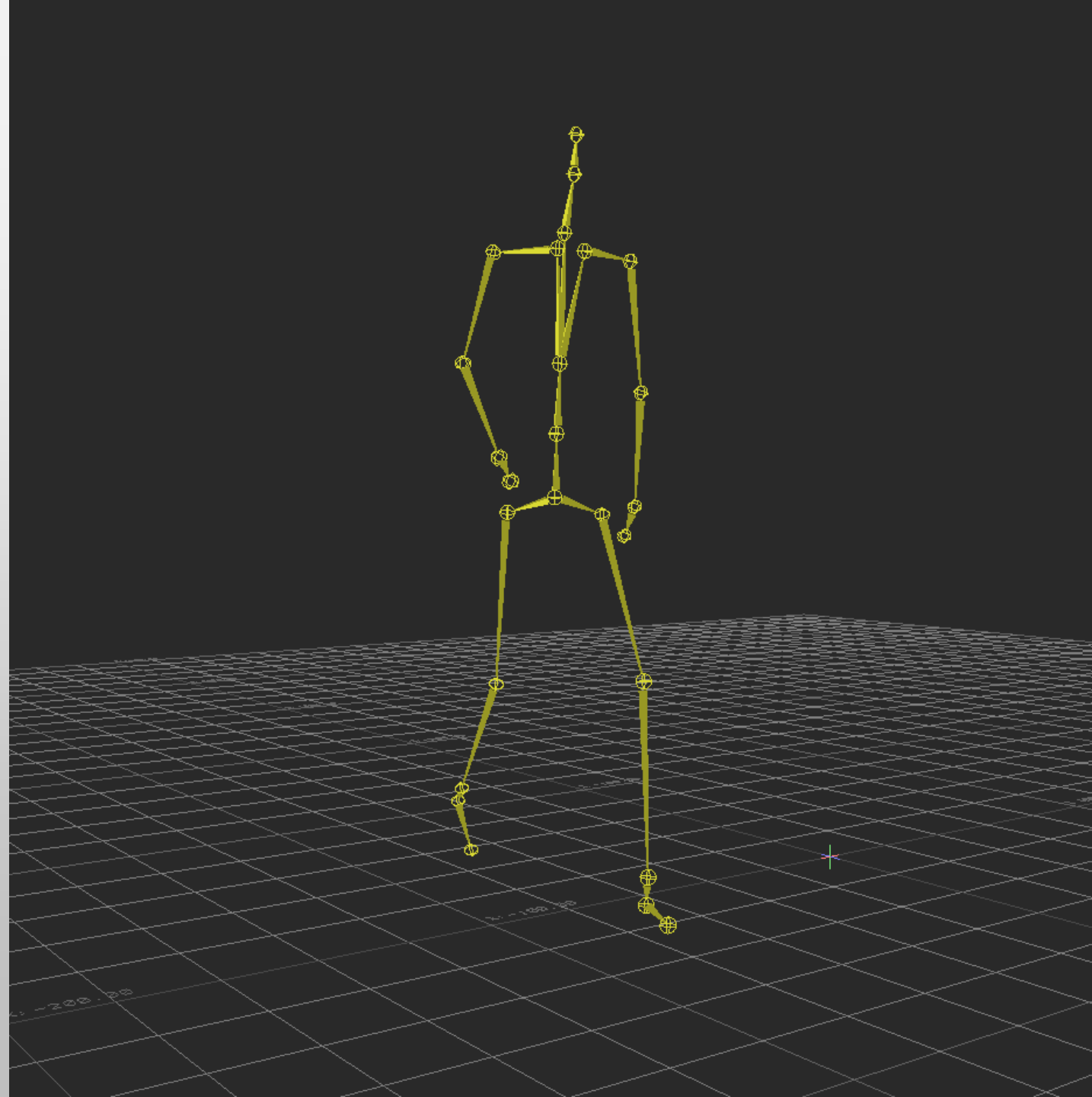


Rendered Output



Motion Capture

- Many different forms
 - Inertial
 - Optical
 - Markerless
- Real-time visualisation
- Store for later application
- Personalised animation
 - Combine with avatar
 - Apply cloth simulation
 - Virtual-fit
- Animated fashion shows
 - Global audience
- VR experience



Virtual Fit Technology

- Successes.
- Limitations.
- Possibilities.
- Future.

CLICK TO ZOOM PLAY VIDEO

YOU MAY ALSO LIKE

GIAMBATTISTA VALLI BOTTEGA VENETA WOLFORD

...a catwalk of your 3D self...

THE FITTING ROOM

MENU SHARE NEXT

FEEDBACK HELP

L.K. Bennett London

PLEASE ENTER YOUR MEASUREMENTS

cm inches

HEIGHT 5' 6" in.

BUST 35 in.

WAIST 28 in.

HIPS 39 in.

ARM 26 in.

MEASURING YOUR WAIST: Wrap the tape measure around your body, halfway between the top of your hip bone and the bottom of your ribs. Breathe out naturally and take the measurement.

PRINT MEASURING TAPE

SAVE MY MEASUREMENTS Show the virtual me



Why can't I try on the actual garment?

Many of our garments fit in exactly the same way, even if they look different. The garment you chose and the garment you're trying on share the same cut and sizing.

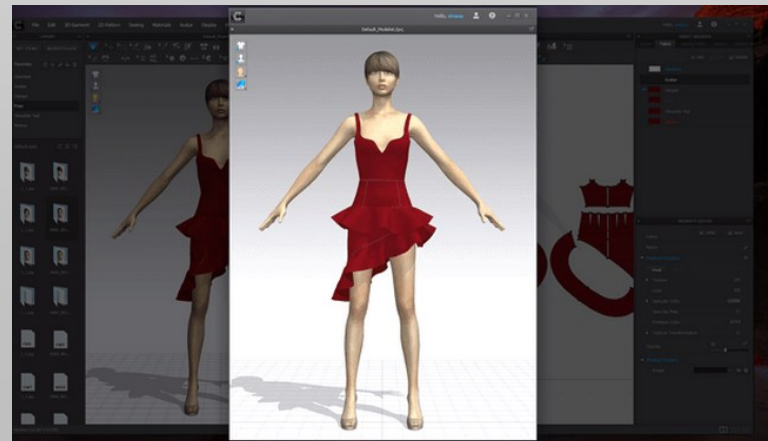
T.M. LEWIN LONDON

CLOSEST SIZE: Try other sizes before choosing. S

Trying M

CHANGE YOUR MEASUREMENTS M BACK TO SHOP

HELP | Virtual Fitting Room by Ebyline



Boundless thinking inspired by the digital revolution.



Limited by technology then, limited by technology now.

CLICK TO ZOOM PLAY VIDEO

YOU MAY ALSO LIKE

GIAMBATTISTA VALLI BOTTEGA VENETA WOLFORD

...a catwalk of your 3D self...

THE FITTING ROOM

MENU SHARE NEXT >

FEEDBACK HELP

L.K.Bennett London

PLEASE ENTER YOUR MEASUREMENTS

cm inches

5' 6"

HEIGHT in.

35

BUST in.

28

WAIST in.

39

HIPS in.

26

ARM in.

SAVE MY MEASUREMENTS

Show the virtual me

MEASURING YOUR WAIST
Wrap the tape measure around your body, halfway between the top of your hip bone and the bottom of your ribs. Breathe out naturally and take the measurement.

PRINT MEASURING TAPE



Why can't I try on the actual garment?

Many of our garments fit in exactly the same way, even if they look different. The garment you chose and the garment you're trying on share the same cut and sizing.

T.M. LEWIN LONDON

CLOSEST SIZE
Try other sizes before choosing

S

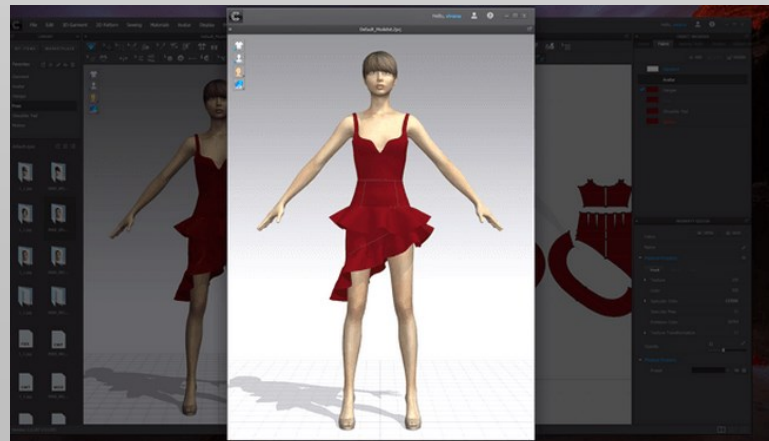
Trying M

May be large!

CHANGE YOUR MEASUREMENTS

M BACK TO SHOP >

HELP | Virtual Fitting Room by Ebyline



What about new tech?

- Previously driven to improve service, reduce returns, provide wow-factor.
- Half-way-house between online and in-store.
- What if we look to a different industry to provide the technology for the future of virtual-fit?

What if?



What if?



Not if, or how, but when...

- Some complications – cloth simulation, uncanny valley.
- Huge advantages – closer replication of the shopping experience.
- Advantages for individuals who may struggle with disabilities or mental health.
- Businesses and designers can get straight to the consumer with ease.
- Potential higher spend – micro transaction effect.