



3DEXPERIENCE®

Design visualization With CATIA Live Rendering, iRay & VCA

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Pierre Maheut

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Design Visualization with CATIA

Realtime High End visualization



Design modeling

Interactive Raytracing & Global Illumination



Design validation

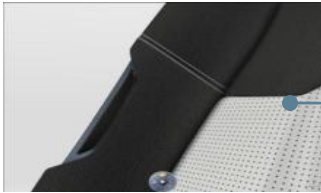
CGI Production



Product Experience

CATIA Visualization

Unified & integrated Viz engines



● Realtime Visualization



● Interactive Raytracing & GI

For Multiple needs

Modeling in Real visualization

Design Presentation & validation

Color & Trim Design study

Perceived Quality visualization

CATIA Visualization

Unified & integrated Viz engines



● Realtime Visualization



● Interactive Raytracing & GI

Challenge

- Massive PLM Data
- Native exact geometry
- Modeling experience
- Push button

CATIA Live Rendering

Integrated
Realtime Visualization
AND
Interactive Rendering

- Interactive** Raytracing & Global Illumination
- Integrated** in your 3D modeling experience
- Based on** Nvidia iRay
- Physically** Correct based
- Hybrid** CPU & GPU
- Photograph** Lifelike user experience



CPU & GPU Scalability



Decision maker
Manager
Nomad user



Panasonic 4K
Integrated GPU



Casual user
Designers
3D Modelers



Laptop / Workstation
CPU & CUDA Nvidia Quadro



Viz Expert
Color & Trim expert
CG Imagery expert



BOXX Workstation
CUDA Nvidia Multi GPU



Team review
Large & High Resolution
Display



Nvidia VCA
CPU / GPU Cluster

Design Visualization with CATIA

Document_2012

Realtime High End visualization



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Product Experience

3DS.COM/CATIA © D

Design Visualization with CATIA

Realtme High End visualization



Design modeling

Realtme Design modeling experience

Native geometry

Modeling experience

CATIA for Creative Designers
from art to part







Compress

Do you allow to compress a copy off the image :
"\\lenov093DSY\HOME04-Demo\00-CATIA Creative Design
Creations\Cassiopeia\Video\IMA Detail Modeling
simple\Logo\cassiopeia_Gaussian_White.png"
2787 * 3331 => 167 * 200

Yes No

Open

IMA Detail Modeling simple > Logo Search Logo

Organize New folder

- cassiopeia_Gaussian_White.png
- CATIA_Logo.jpg
- logo_Cassiopeia_gaussian_Spx_smaller.png

File name: cassiopeia_Gaussian_White.png * File (*.*)

Open as read-only Open Cancel



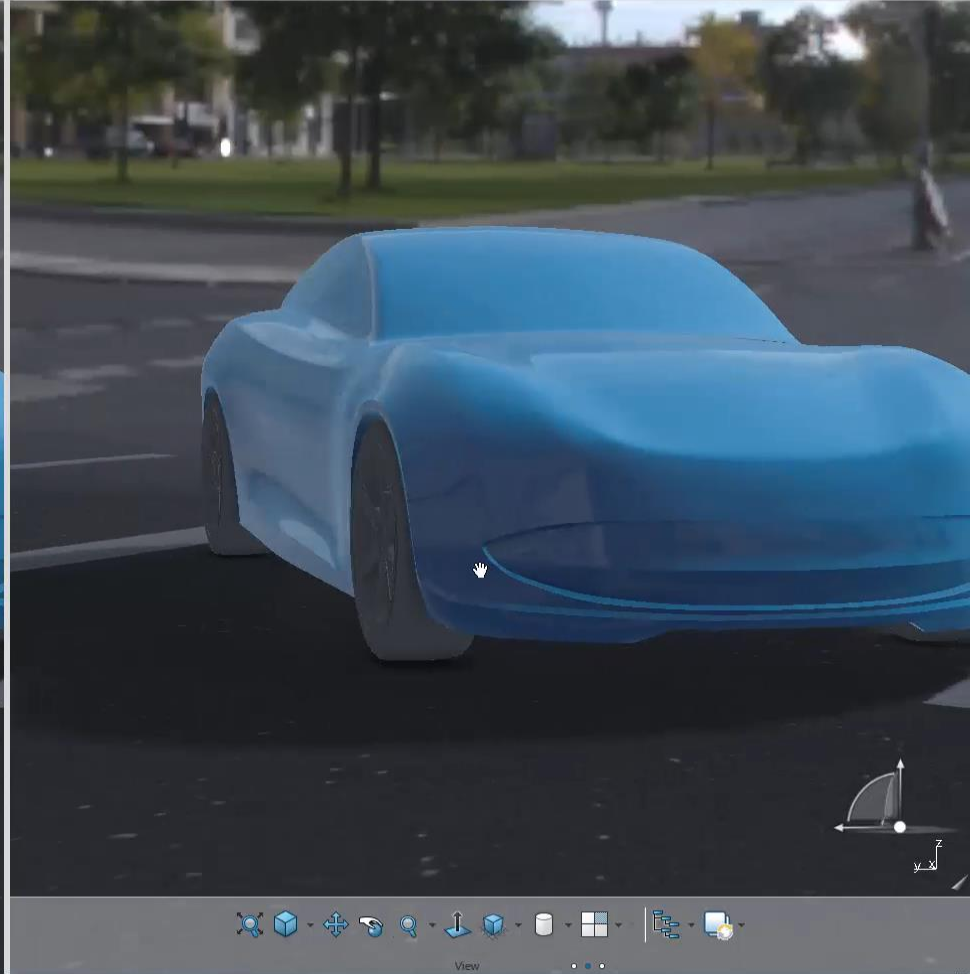
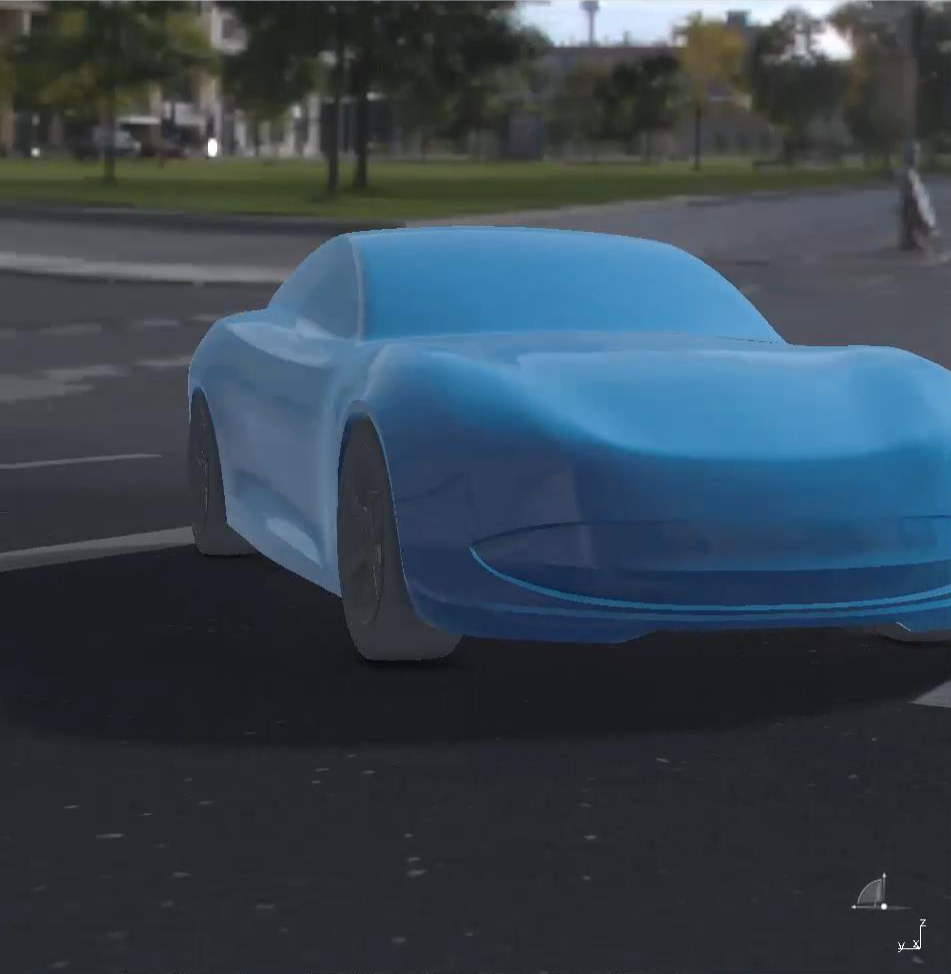
Detail Level

Detail Level 6



-alt-bleu DEMO PART 1-IMA ---000 x

bleu DEMO PART 1-IMA ---000 x





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Domes & Backplates

Dome Backplate

exterior_plaza_1

Dome Geometry

Ground



Live Rendering



Design Visualization with CATIA

Document_2012

Realtime High End visualization



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Product Experience

3DS.COM/CATIA © D

3D Light room
Exact geometry | iRay photoreal

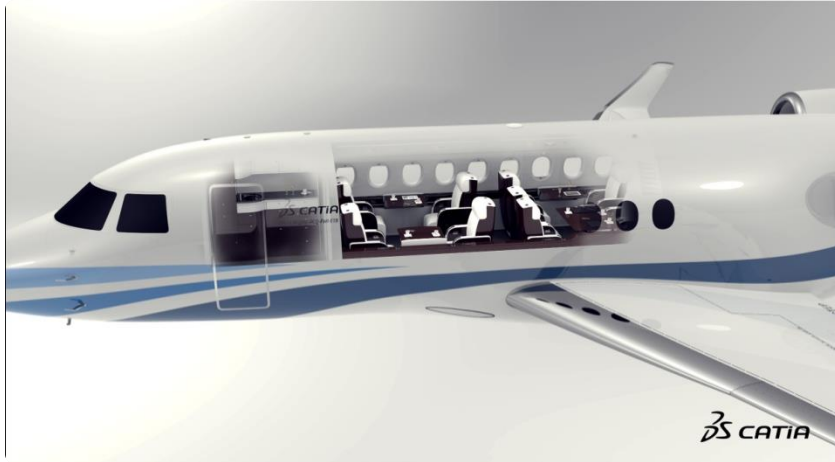




bleu

CATIA Live Rendering (interactive Rendering with iRay)

Nvidia K6000 [12Go Ram, 2880 CUDA Cores]



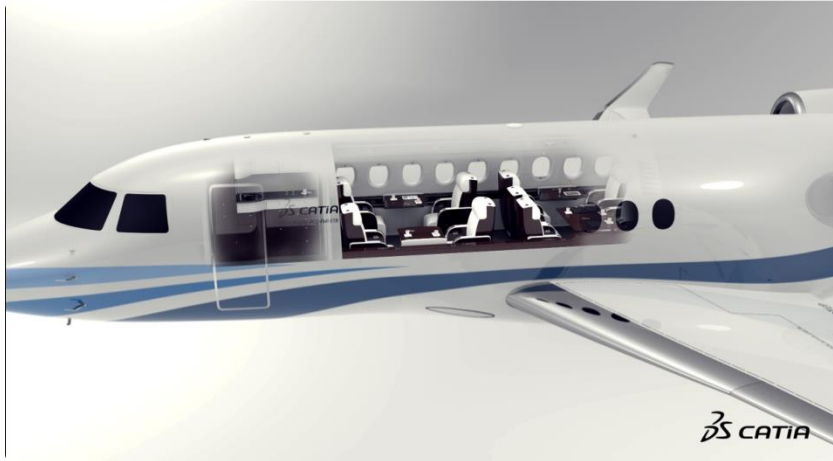
Loftjet Challenge

- Massive Data
- Native CAD geometry
- Interior Lighting simulation
- Complex material & diversity

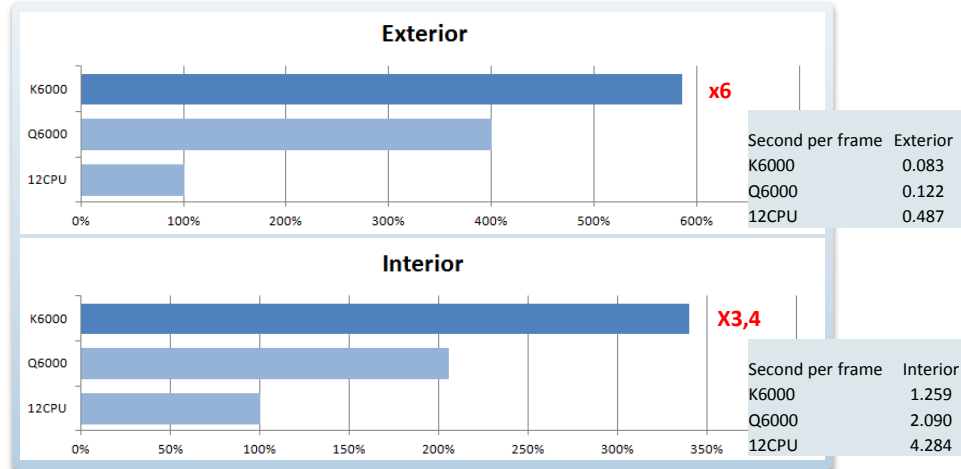
CATIA Live Rendering (interactive Rendering with iRay)

Nvidia K6000 [12Go Ram, 2880 CUDA Cores]

Number of triangles	70 444 387
Number de Parts	802
Number of materials	62
K6000 Ram used	6,3 Go
Resolution	Full HD



Performance based on Rendering time per iteration

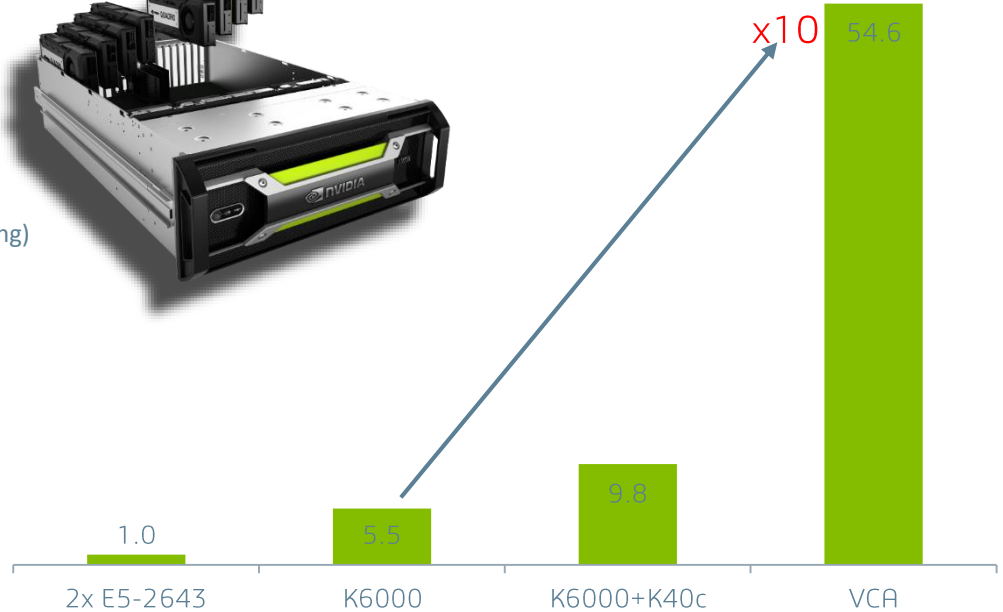




CATIA Live Rendering (interactive Rendering with iRay)

New in R2015x Support of **NVIDIA VCA**

GPUs 8 NVIDIA High-End GPUs
GPU Memory 12 GB per GPU
CUDA Cores 23,040
CPU Cores (20 / 40 Hyp. Threading)





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Realtime High End visualization



CATIA V6R2010 Real Time Rendering

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Design validation

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Product Experience

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Cassiopeia Challenge

- Color & Trim
- Emissive Lights
- Animations

Cassiopeia



Cassiopeia



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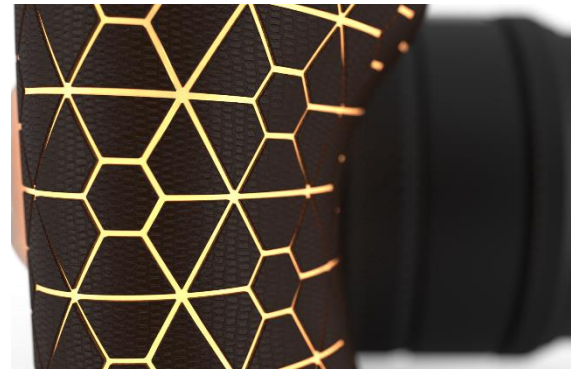
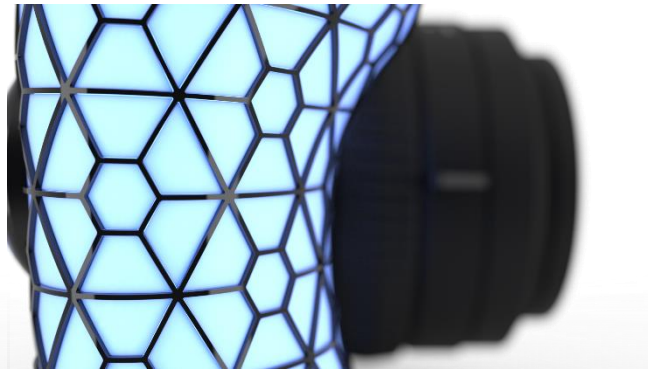
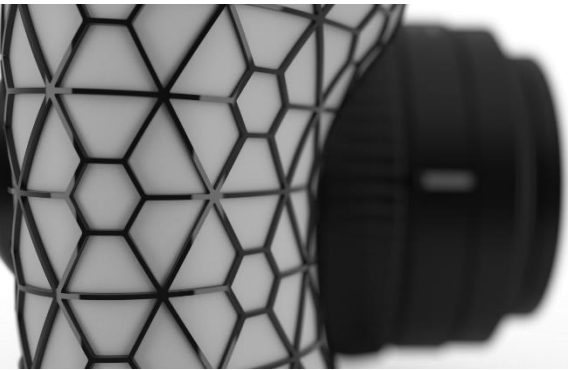
Cassiopeia

ft 3.5 5 6 8
m 1.2 1.5 2 3

CATIA Design



Emmissive Light







3S CATIA

35mm 1:1.4







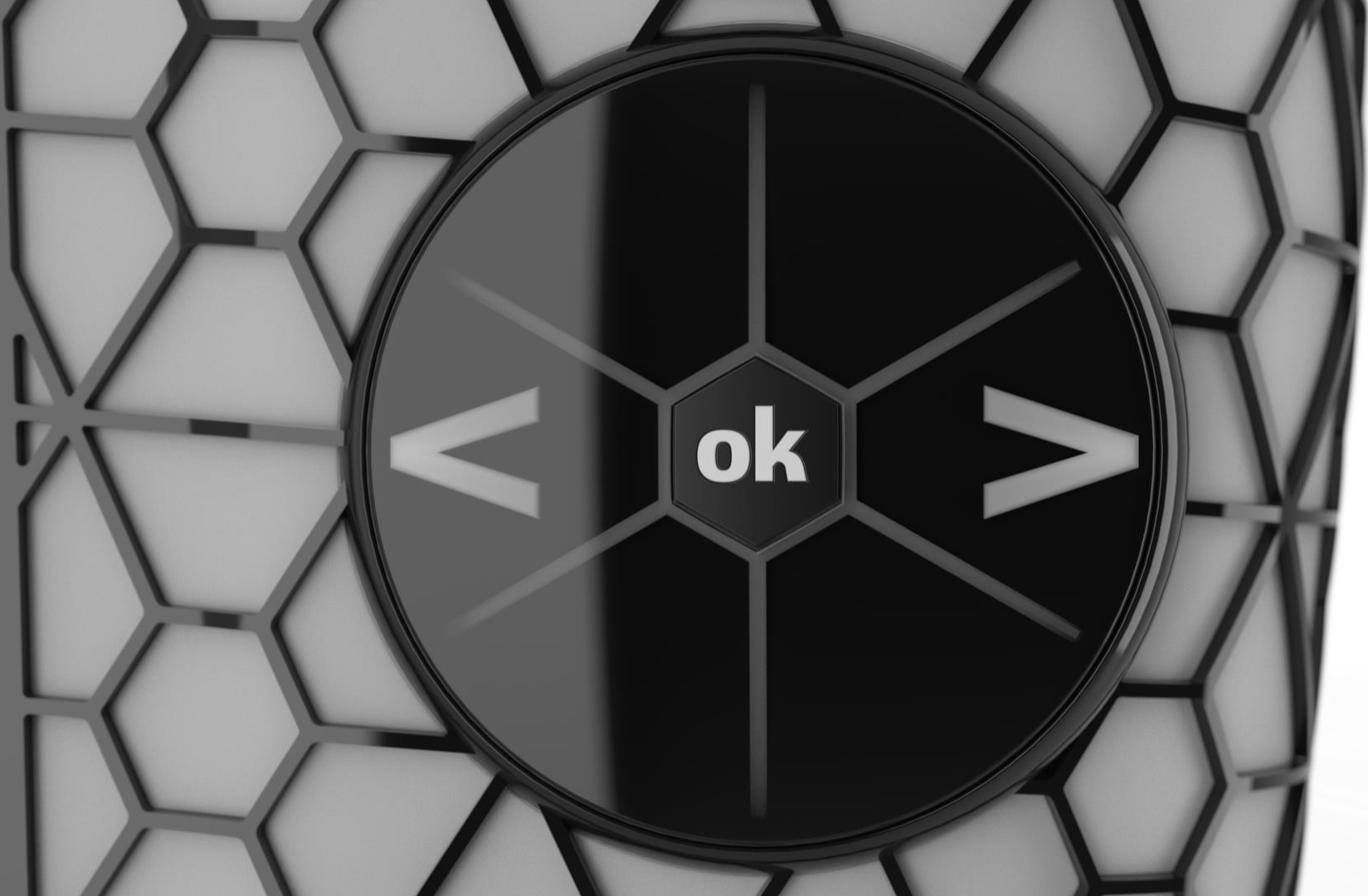


CATIA

35mm 1:1.4
m
feet

35mm 1:1.4









ok



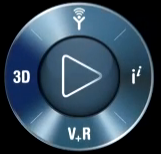
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