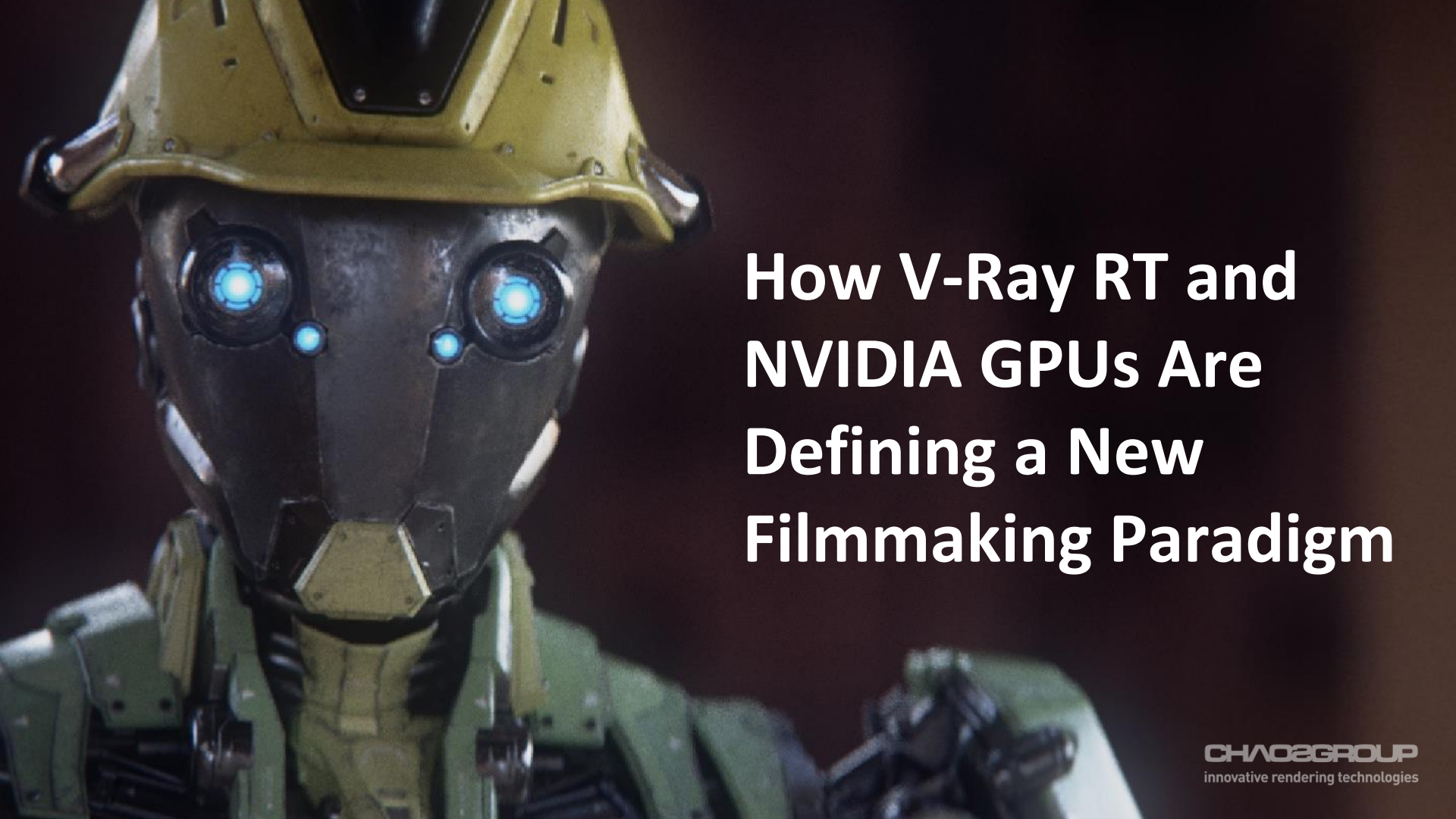
CHAOSGROUP

GPU Rendering Roadshow 2014

CHAOSGROUP
innovative rendering technologies



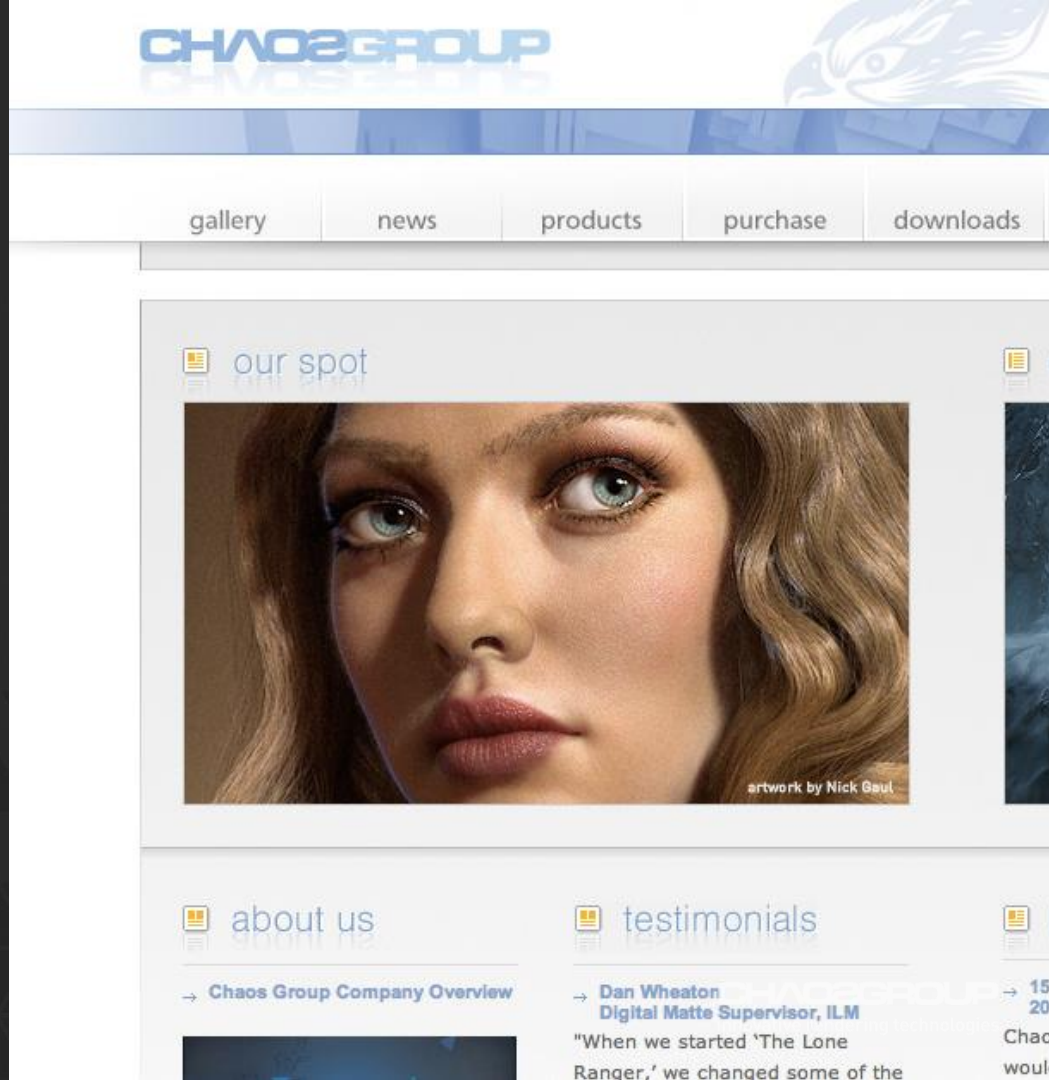
How V-Ray RT and NVIDIA GPUs Are Defining a New Filmmaking Paradigm

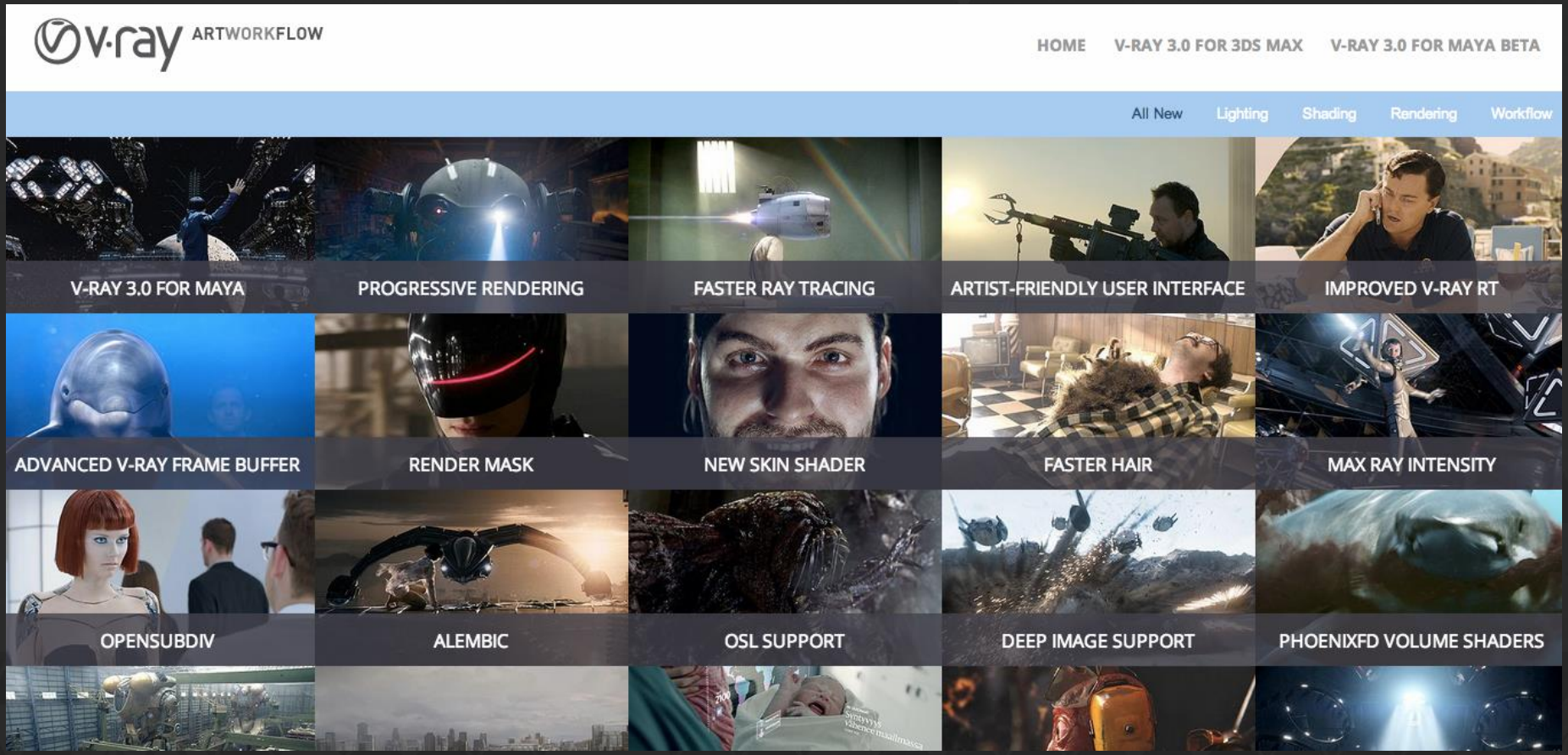
CHAOSGROUP
innovative rendering technologies

- A Brief History of Chaos Group
- Why GPU Rendering
- Lighthouse Project
- CONSTRUCT
- The Future

CHAOSGROUP
innovative rendering technologies

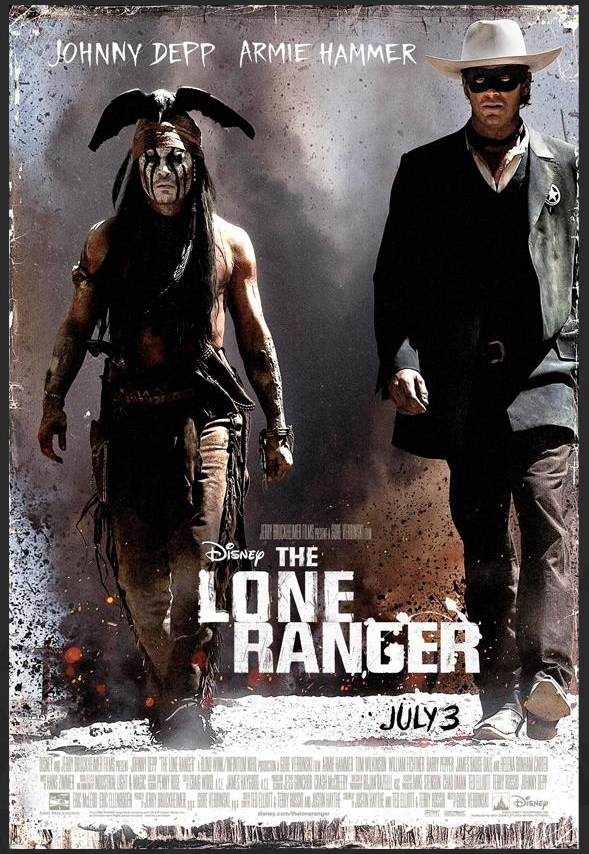
- 2002- V-Ray for Max
- 2007- GPU research begins
- 2009- V-Ray RT
- 2010- V-Ray for Maya
- 2011- V-Ray for Rhino
- 2011- V-Ray for SketchUp
- 2012- V-Ray for Softimage
- 2014- Stay tuned





- Chaos Group Today

CHAOSGROUP
innovative rendering technologies



CHAOSGROUP
innovative rendering technologies

Film

Popular Mechanics

TRY: Hottest

AUTOMOTIVE | TECHNOLOGY | SCIENCE | HOME HOW-TO

Creating the Helicarrier of *Captain America: The Winter Soldier*

How Industrial Light & Magic created the largest CG model in its history.

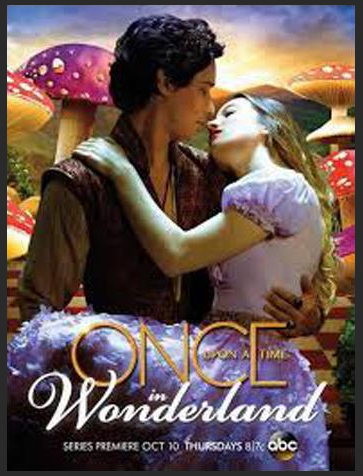
By Bill Desowitz

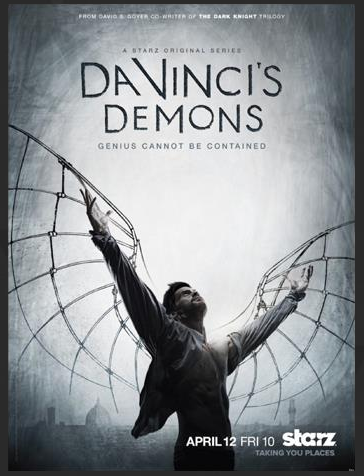
Submit 0 Share Like 69 Pin it Tweet 13 g+1

April 7, 2014 5:30 PM

TEXT SIZE: A . A . A

The star of *Captain America: The Winter Soldier* is neither Captain America nor the Winter Solider. It's the next-gen Helicarrier, a technological marvel and ultimate superweapon that can stay in orbit to target and kill about a million victims at once. But is it a terrorist's worst nightmare, or American militarization out of control? That's the big dilemma facing Chris Evans's Cap and the vaunted S.H.I.E.L.D.

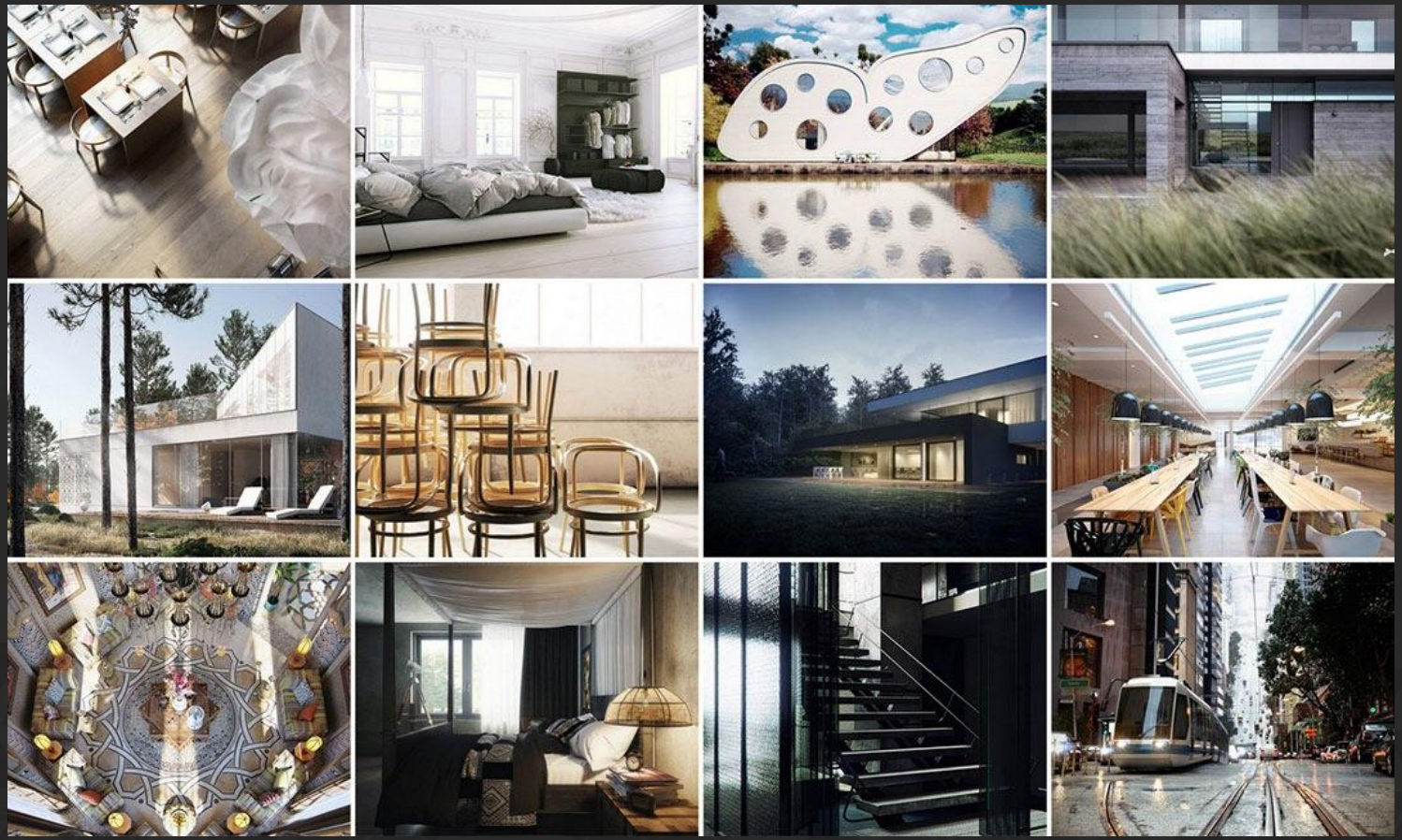




CHAOSGROUP
innovative rendering technologies

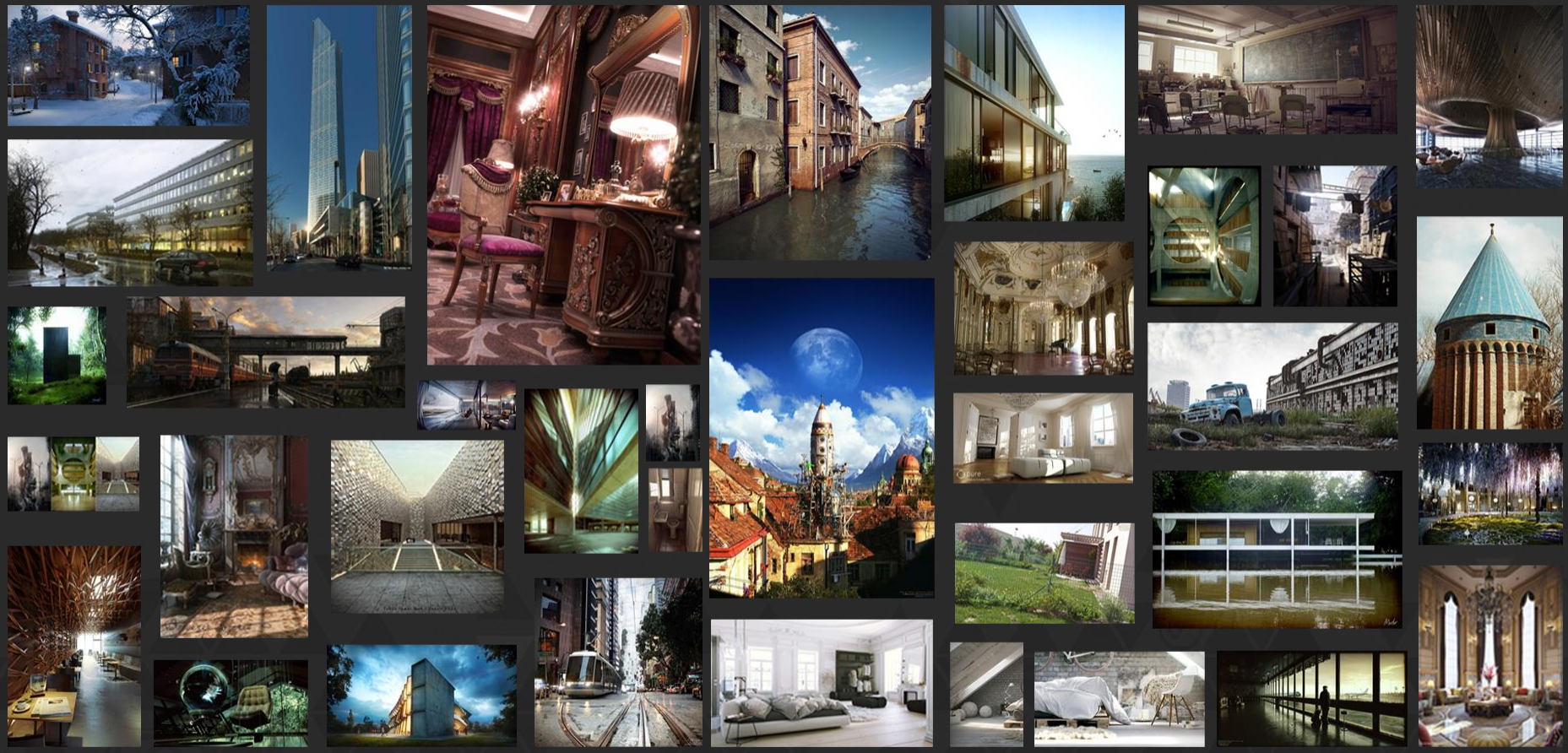
Design

CHAOSGROUP
V-RAY
VISIONARY
DESIGN
DAYS
APRIL 9-15
artwork by THEVERYMANY



Best Visualizations of 2013

CHAOSGROUP
innovative rendering technologies



Gizmodo

CHAOSGROUP
innovative rendering technologies

http://humster3d.com/3d-vehicle-render-competition/

- V-Ray Production
- V-Ray Progressive
- V-Ray RT [CPU]
- V-Ray RT [GPU]

CHAOSGROUP
innovative rendering technologies

The Roundtable

The Roundtable

The Cast of Characters

Mike Romey

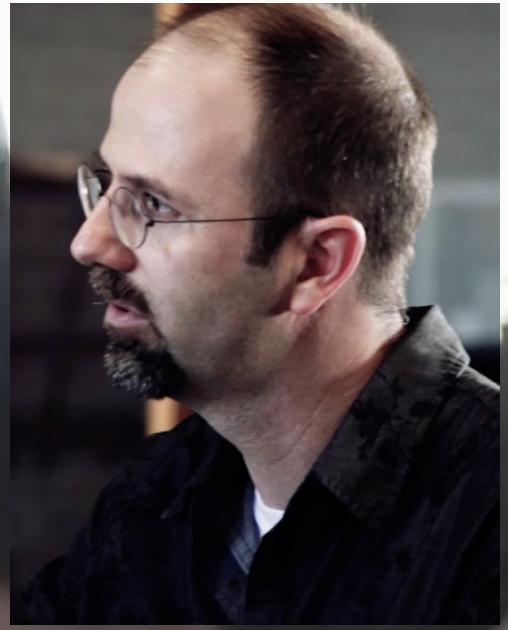
Head of Pipeline
ZOIC Studios

CHAOSGROUP
innovative rendering technologies

Kevin Margo

VFX/CG Supervisor
Blur Studio

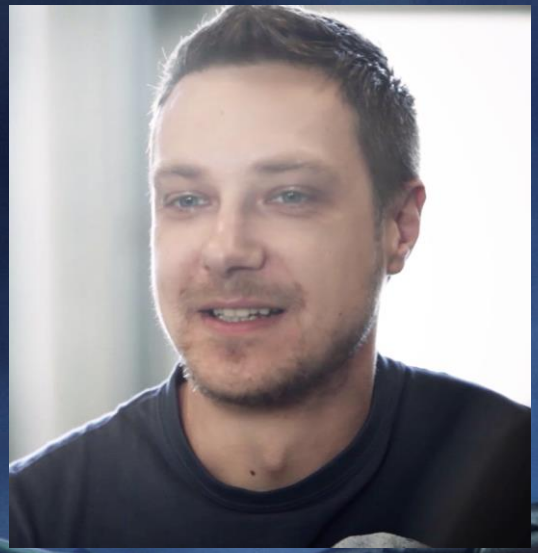
CHAOSGROUP
innovative rendering technologies



Christopher Nichols

Creative Director

Chaos Group LAbs



Vlado Koylazov

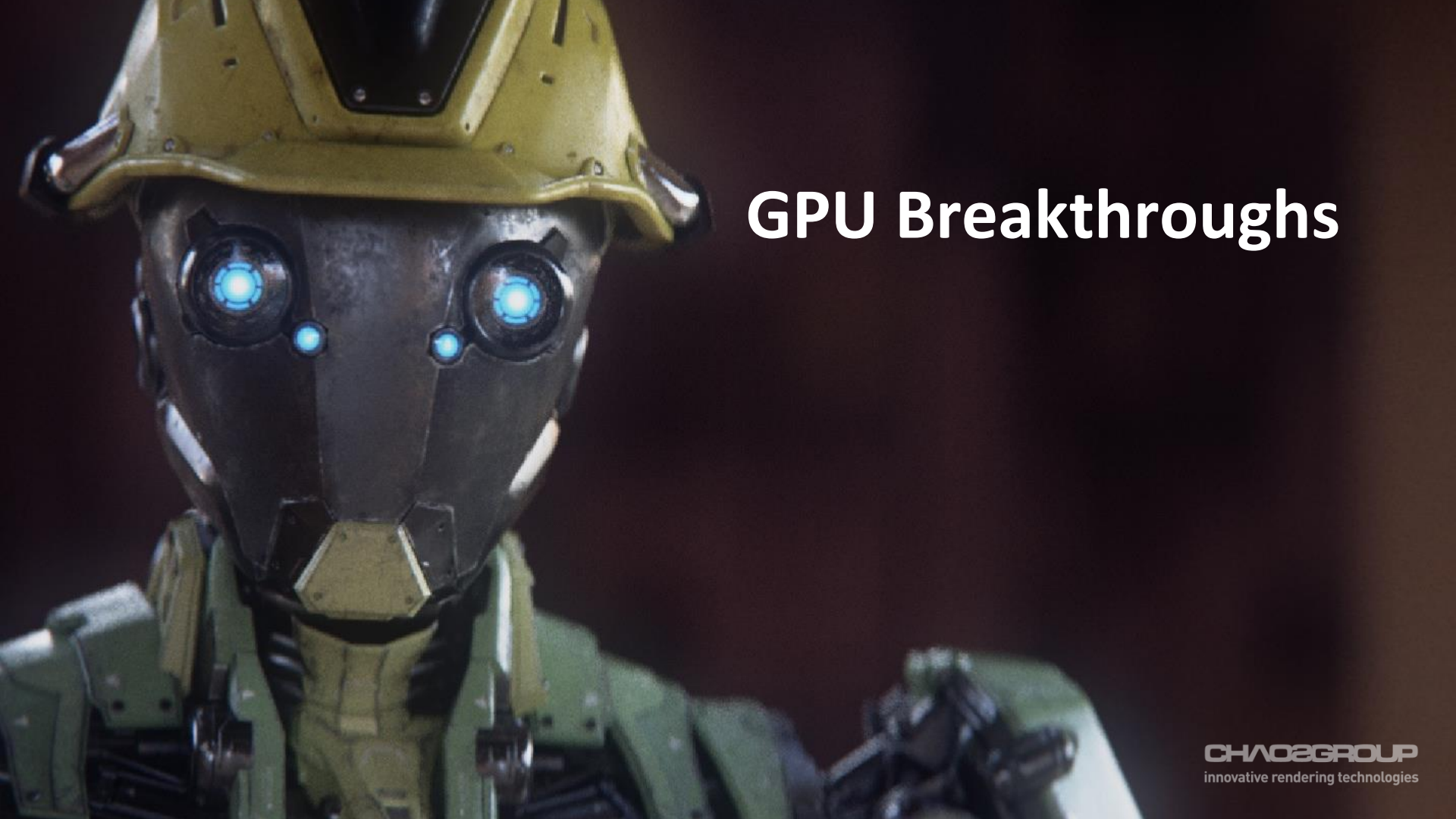
Chaos Group
Co-Founder and
CTO

CHAOSGROUP
innovative rendering technologies

Why GPU Rendering

CHAOSGROUP
innovative rendering technologies

Lighthouse Project
CHAOSGROUP
innovative rendering technologies


GPU Breakthroughs
CHAOSGROUP
innovative rendering technologies

CONSTRUCT

CONSTRUCT

- CG animated short film
- Tell a personal story
- EXPLORE and DEFINE new filmmaking techniques

CHAOSGROUP
innovative rendering technologies

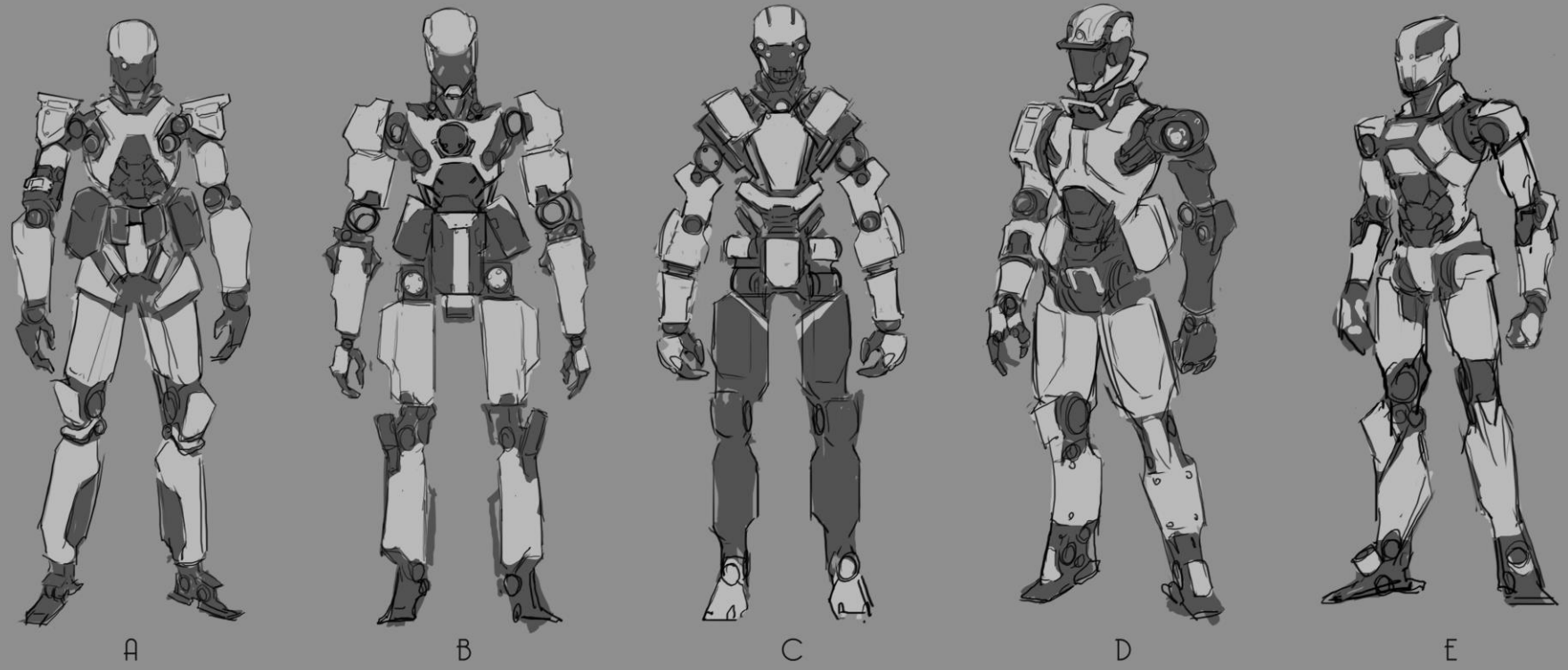
CONSTRUCT

- Designed with the GPU in mind
- Small team
- Massive computational power
- Small footprint

CHAOSGROUP
innovative rendering technologies

CONSTRUCT

CONSTRUCT



CONSTRUCT

Bill

Wife

Child

Foreman

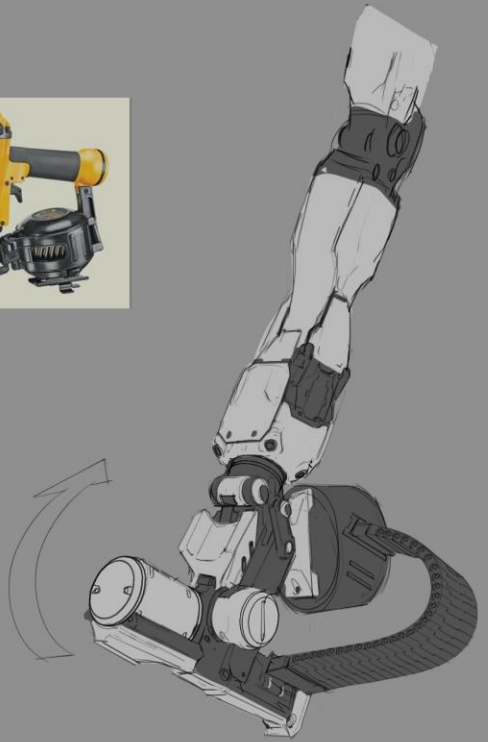
Worker

bill's family

CONSTRUCT

CONSTRUCT

CONSTRUCT



CONSTRUCT

CONSTRUCT

CHAOSGROUP
innovative rendering technologies

CONSTRUCT

CONSTRUCT

CONSTRUCT
HD Final Frame Rendering 5-7 minutes
1 K6000, 2 K40s
Rendered on 3 machines
CHAOSGROUP
innovative rendering technologies

CONSTRUCT

Rendering During Production

CHAOSGROUP
innovative rendering technologies

V-Ray App SDK

Clara.io BETA
Learn
Forum
Blog
Company
Try Clara.io Now!
Log In
3D Creation and Sharing on the Web
No downloads, no licenses, no configuration.
Create, upload, tweak, share, convert, and collaborate with Clara.io. Right from your browser.

CONSTRUCT

- Real world light and surface simulation
  - Physically accurate materials
  - Physically accurate lights

The Future of
Filmmaking
CHAOSGROUP
innovative rendering technologies

Democratizing
the Creative Process
CHAOSGROUP
innovative rendering technologies

Coming to V-Ray RT

Coming to V-Ray RT

- Displacement
- Subsurface Scattering
- Hair
- Volumetrics

CHAOSGROUP