NVidia GPU Technology Conference
2014
Presenters

BOXX Technologies, Inc.
Tim Lawrence – Vice President of Engineering and Operations

Dassault Systemes
Philip Borchard – CATIA Client Executive
Andre Clemons – CATIA for Creative Design Technical Lead
BOXX – Solving Problems For Over 15 Years

Mission
To deliver tangible value by maximizing the creative potential and productivity of our customers.

History
- Founded in 1996. Located in Austin, Texas
- Specialized in workstations and render nodes for VFX, design, Digital Content Creation, engineering and simulation applications.
- The BOXX Model: Leverage best-in-class technology and innovative solutions to solve real problems for Digital Artists, Post-Production studios, design professionals, engineers and architects.
BOXX builds Xtreme solutions to maximize the productivity of the creative professional:

There are two exceptional BOXX systems certified for CATIA:

3DBOXX 4150 Xtreme
- Compact High Performance Workstation
- Ideal for all aspects of CATIA

3DBOXX 8950
- Multi-GPU Super Workstation
- Ultimate performance for Real Time Rendering and Visualization
3DBOXX 4150 Xtreme

- Compact, Powerful and Certified
- Safely Overclocked to 4.3GHz
  - Over 20% faster cores than standard Workstations
  - Only CATIA Certified Overclocked Workstation
- Optimized for Best of Class Graphics Cards
  - Certified for CATIA with up to the nVidia K6000
- Liquid Cooled CPU
  - Quiet

www.boxxtech.com
3DBOXX 8950

- Multi-GPU Super Workstation
- Supports up to 5 GPU’s
  - Up to 4 Dual Slot GPUs + 1 Single Slot
  - 11 Total Back Panel Slots
  - Only CATIA Certified Workstation with more than 2 GPUs
  - Certified with 3-4 Tesla + 1 Quadro
- Up to 24 Cores and 256GB of Memory
- Liquid Cooled CPUs
  - Quiet
Three Projects – Three Visions

Collaborate

Work from Anywhere

Art to Part

Arthur Coudert

Jens Paulus

Francois Quentin
ideation

inspiration

"A major influence on the blue project is the aerospace world, especially wing design, air intakes, and windshields. For bleu, I tried to revisit the shape grammar - you can find some of the elements in the front and rear lights or the side character line. As a Creative Designer using CATIA, I felt connected to the rest of the project team, being able to interact with all of them and sharing the same language: the 3D model. The most impressive thing for me using CATIA is how close the final car is to my design intent."

Patrik COUDERT - Lead designer

CATIA Natural Sketch quickly translates ideas into a 3D reality to easily describe the volumes, proportions, and the character lines to create the signature of bleu. Later in the creative process, CATIA Natural Sketch serves as a communication tool with the 3D digital models, like a virtual tape drawing.
Jens Paulus Design:

Industrial Design & Yacht Interior Designer

- Design & Collaborate with Clients in Any Location
- Concentrate On Design, Not System Administration
- Large Company Visualization Capabilities
End to End – idea to reality

Dream

Design

Test

Make

Manage

Sell
CATIA for Creative Designers
from art to part
CATIA for Creative Designers
from art to part

Concept | Conceptualization
Design validation | Visualization & Experience
Refinement | Detail Design
Inspiration | Social Innovation
Ideation | Creativity

CATIA for Creative Designers from art to part
Design Visualization with CATIA

- Realtime High End visualization
- Interactive Raytracing & Global Illumination
- CGI Production

- Design modeling
- Design validation
- Product Experience
CATIA Visualization

Unified & Integrated Viz engines

- Real-time Visualization
- Interactive Raytracing & GI

For Multiple Needs

- Design Modeling
- Design Presentation
- Design validation
- Real-time Color & Trim Design study
- Visual Perceived Quality
- Visuals for technical documentation
- Visuals for marketing materials
CATIA Visualization

Unified & Integrated Viz engines

- Real-time Visualization
- Interactive Raytracing & GI

Challenge

- Massive PLM Data
- Native geometry
- Modeling experience
CATIA Live Rendering
Interactive Raytracing & GI

Based on NVIDIA iRay
Interactive GI + Raytracing
Physically Correct ‘based’
Hybrid CPU & GPU CUDA
Photograph Lifelike user experience
Rendering Take Aways

- Use rendering as daily exercise to experience your products
- Do not let hardware capacity limit creativity
- Team with your technology partners
BOXX Difference

Purpose built machines that enable peak productivity

- Fully supported overclocked solutions, ideal for frequency bound applications
- Custom designed, core dense, workstations and render nodes perfect for simulation and rendering applications
- Legendary technical support and performance specialists based in the U.S.
- Intimate knowledge of our customer’s software and how to solve workflow bottlenecks
- Close relationships with key hardware and software partners like Intel, NVIDIA, Autodesk and ChaosGroup

“The world’s fastest supercomputer just over 15 years ago is now available in BOXX workstations and dedicated rendering systems,” said Frank Soqui, Intel Corporation, Technical Computing Group, and Workstation General Manager. “They feature two of the latest Intel® Xeon® Processor E5-2600 v2 that deliver just over one teraflops of performance. Now users can explore, discover, and innovate faster than ever before.”
Product Categories

**Workstations**
- Single CPU or Dual CPU options
- XTREME editions featuring overlocked CPUs
- Up to 24 cores in a single machine
- Industry’s highest performance Workstations

**Dedicated Rendering**
- Purpose-built rack mounted or deskside render solutions for PC and MAC offloading
- IPMI 2.0 technology featuring KVM over IP for easy management
- Highest density render farm nodes with 10 dual processor systems with 240 cores in a 4U rack

**Mobile**
- The mobile workstation with the power of a desktop
- Intel Core™ i7 desktop processor option
- High-performance NVIDIA Quadro® graphics for professional applications
- Up to three hard drives (SSD) for multiple streams of uncompressed HD video

**Specialized Solutions**
- Remote Access Workstation using a PCoIP portal device (at each desk) connected remotely to the user’s workstation (via Ethernet)
- Dedicated media storage options
3DBOXX 4100 Series

High Performance. Affordable Price.

3DBOXX 4120
- Compact chassis
- Affordable
- Liquid cooled
- Whisper quiet

3DBOXX 4150 XTREME
- Overclocked CPU
- Perfect for frequency bound applications like CAD
- Supports two full size professional graphics cards
- Compact chassis
- Affordable
- Liquid cooled
- Whisper quiet

3DBOXX 4170
- Dual Thunderbolt 2 ports
- Easy connectivity to high performance peripherals
- 802.11ac dual band Wi-Fi antenna
- USB 3.0 Boost Technology (170% faster than standard USB 3.0)
- Liquid cooled
- Whisper quiet

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- Liquid cooled
3DBOXX 8900 Series  The Ultimate Workstation Experience

3DBOXX 8920
- Intel E5-2600v2 CPUs
- Liquid cooled
- Whisper quiet
- Up to 24 cores in a single workstation
- Up to three professional NVIDIA® graphics cards

3DBOXX 8950
- Dual Intel® Xeon™ E5-2600v2 Series Processors
- Up to Four Dual Slot PCI-E 3.0 x16 Add In Cards
- 12 total Add In Card Slots to accommodate advanced multi-card configurations.
- Liquid Cooled
- Whisper quiet
- Large memory capacity (Up to 512GB)
From overclocked workstations to advanced PCI-e card configurations, BOXX offers the industries most powerful, purpose built hardware, designed and optimized for peak productivity.

Custom designed chassis allows maximum cooling capability and efficiency which facilitates unique system designs that specifically address the bottlenecks of our customers.

BOXX strictly uses enterprise class components in all of our systems. When combined with our custom design efficiencies and strategic hardware partners like Intel, it’s easy to recognize BOXX as the industries leading manufacturer of high performance hardware solutions.

BOXX’s legendary technical support staff and performance specialists are second to none. We pride ourselves on possessing an intimate knowledge of our customer’s software applications, workflow and bottlenecks to ensure they get the most out of our products.
BOXX @ GTC

Scalable Display Technologies’ Avizo and Revit demos
Location: Scalable display Technologies booth

GPU final frame rendering presented by Chaos Group
Day: Tuesday, 03/25
Time: 14:30 - 14:55
Location: Room 211A

PSA Peugeot Citroen real-time simulations
Day: Wednesday, 03/26
Time: 09:00 - 09:50
Time: 16:00 - 16:50
Location: Room 220C

Iray demos at the PNY Pavilion
Location: PNY Pavilion