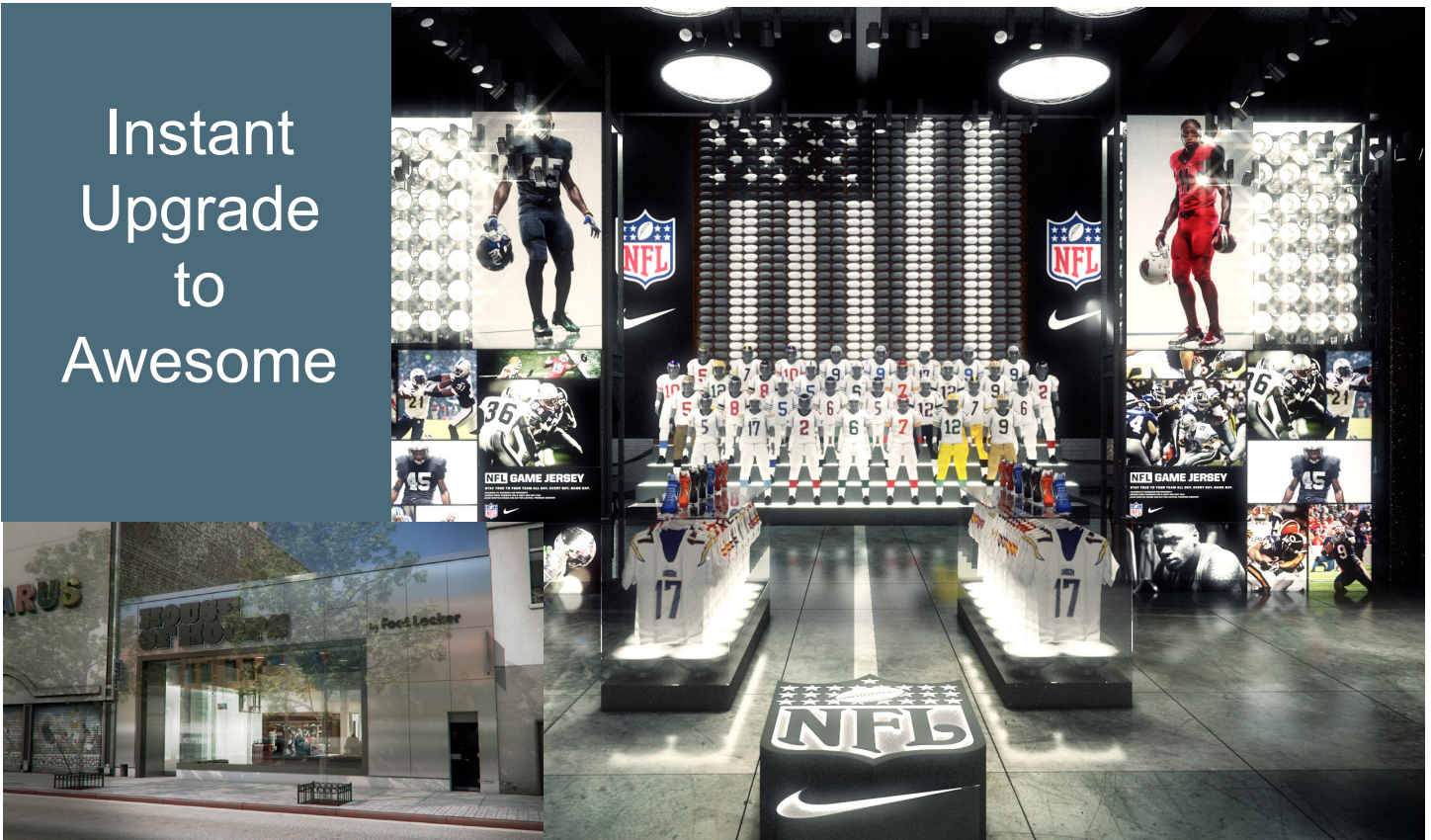# Instant Upgrade to Awesome

In order to meet demand from high profile clients like Nike, Coca Cola and Disney, IDL Worldwide chose the ultimate rendering solution from BOXX

- By John Vondrak

Beginning in 1850 as a manufacturer of military stamp dies, branding irons, ornate engravings, and stamps used for wooden crates, Matthews International Corporation has expanded to over fifteen countries across four continents and currently employs over 3,800 people throughout the world. The company is divided into two main divisions: Memorialization and Brand Solutions. Both divisions are comprised of smaller subsidiaries and under these, there are even more divisions. For example, in the main Matthews Brand Solutions Group you will find Packaging Solutions, Marking Solutions and Merchandising Solutions. It is this last group where IDL Worldwide makes its home.

In general, IDL Worldwide provides design, engineering, fabrication, fulfillment, and installation to well-recognized brands and retailers (Coca-Cola, Nike, Target, Disney, and Sprint to name a few) in order to help them improve both their methods of selling products and the way in which they communicate with their retail customers. More specifically, IDL Worldwide provides everything from retail strategy support and design to customized store fixtures, displays, and more. The company employs a full engineering group, with most of its employees located in Pennsylvania at work on design and specifications. However, others can be found in Portland, Oregon, where they work within the group known as IDL 3D.

Members of the IDL 3D team include its creative director Kevin Seewer, a 3D artist and industrial designer who, along with designer and 3D visualization pro Jared Hopkins and others, use 3D visualization to create or transform marketing, product development, and in-store experiences by designing, rendering, and fabricating state-of-the-art retail display fixtures. "Our department has a little bit of everything, says Seewer. "Some designers work in CG, one in architectural visualization, and some have more familiarity with engineering."

When he joined IDL in 2010, Seewer was amazed at the volume of design and visualization work— and just how fast IDL clients wanted it done. "Every day we hear 'I need this today" he says. With seven designers, multiple projects underway at any given moment, and no dedicated rendering system, meeting those brutal turnaround times became extremely difficult. Seewer knew that a render farm was the solution and he had his sights set on renderBOXX, the dedicated rendering modules from BOXX Technologies. But unfortunately, a top flight render farm was not in the budget, so Seewer rolled up his sleeves, cobbled together the company's old, "out of service" workstations and created IDL's first rendering department. "Any workstation no longer in use was hooked up and made a render slave," he laughs.

But he still placed BOXX at the top of his hardware wish list, as did Hopkins, who first became aware of the brand as an undergrad at the University of Idaho. While there, he knew a respected IT expert who was known for extolling the virtues of BOXX. "He considered them the ultimate machine," Hopkins recalls.

Seewer first encountered the hardware manufacturer in the mid 1990's when their glossy ads began to appear among the pages of industry trade magazines. Since then, he had become well-aware of BOXX's standing in the world of professional workstations and rendering systems, so being unable to use the high performance machines was a bit of a disappointment "At that point," he adds, "all I could do was hope that someday I would have BOXX-caliber rendering systems instead of the old PCs with which we were having to make do."
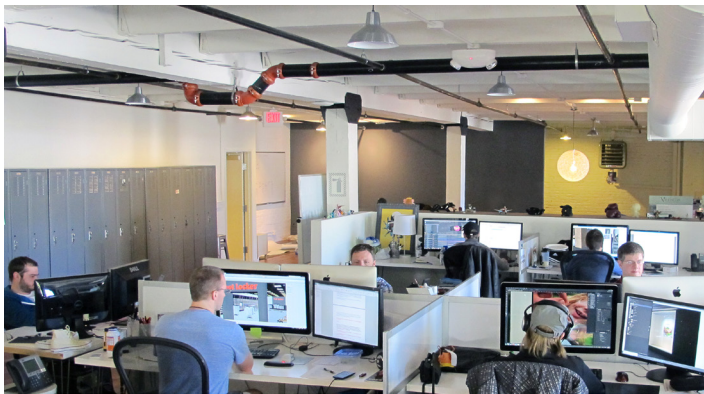
The typical IDL workflow usually consists of an industrial design sketch or a model created in SketchUp. The model is then created or modified, along with materials and lighting, in Autodesk® 3ds Max®. Occasionally, models created in SolidWorks® are used and along the way, ZBrush and other apps may be employed as well. Final renders are done with V-Ray® and then delivered to clients. Back in early 2011, those renders were still being done on the old workstation render farm. To further complicate matters, when customers discovered that IDL could deliver large scale, complex rendering, the 3D team began to attract more business to business rendering work. Prior to that, most of the output generated by IDL 3D consisted primarily of internal visualization work. The good news, of course, was that the additional rendering jobs provided a boost to revenue. The bad news was that they still had seven designers queuing up for access to only three workstations masquerading as a rendering farm. In addition, the problem of managing five to six projects, as well as those demanding turnaround times, were never going away either. "Many clients want it done in a day or less," says Hopkins," but typically, you'll have a week. If you're given two weeks, we consider that a luxury."

All of these factors combined to create what Seewer refers to as "serious bottlenecks." "Once clients realized that IDL had the capacity to produce photorealistic renders, our work just exploded," recalls Seewer, "and it became clear that this makeshift workstation render farm wouldn't suffice." Knowing that more horsepower was needed in order to meet the demand for their services, they visited the BOXX website, and when global solutions manager Dustin Leifheit inquired via live chat if he could help, the initial conversation began. Discussions revolving around the ideal render farm had long been the topic du jour between Seewer and Hopkins, but now it was time to take their concerns to upper management and convince them to make the investment. "We made the case that investing in this farm was investing in IDL," says Hopkins, "and that the return would pay dividends quickly."

The duo had spent a considerable amount of time comparing systems by poring over various hardware websites. They had also debated the pros and cons of building the machines themselves, based on concerns that upper management might balk at allocating the required cash. However, those DIY notions were quickly discarded based on Hopkins' past work (with a former employer) where some machines he had built himself were part of the rendering system. It was not a pleasant experience. "The biggest hassle with that process was IT and troubleshooting," he recalls. "The machines were always breaking down and required constant maintenance." IDL 3D is a small, yet highly efficient, team and Seewer and Hopkins knew that busy schedules and tight deadlines simply did not afford them the opportunity to troubleshoot problems that could arise from a homegrown set up. "It boiled down to pay now or pay later, says Hopkins, "and once that was resolved, it was just a matter of comparing the competition."

A call was made to BOXX and as luck would have it, it was Leifheit who picked up the phone. "Lucky us," says Hopkins. "Dustin is fantastic. We explained our situation and what we were looking for and went from there." After receiving the initial quote, one thing became clear—for the same price, no other manufacturer was offering a system comparable to BOXX. Seewer passed the quote up the chain of command, receiving a quick "thumbs up" from the local office management. Higher up, (and what may seem a bit unusual to readers) the news was equally positive. "Matthews Inc. has been blessed with a very open mind and forward thinking process," says Seewer. "They agreed to the purchase within a few weeks."

Throughout that waiting period however, there was plenty of decision-making underway with Leifheit and BOXX. "I think we must have had him do at least five different configurations," says Hopkins. "The reason being, we knew we had a budget and a vague idea of where it would be, but until we knew the number, it was just kind of grasping. When word came down regarding what exactly we had approval for, Kevin and I had a quick chat. It turned out that the money available was just shy of allowing us to purchase seven renderBOXX

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>
> *-Jared Hopkins*

modules. We contacted Dustin to see if BOXX could help us out…and you know what? They did. Very cool." In June of 2011, IDL purchased seven renderBOXX 10500 dedicated rendering solutions and happily retired the makeshift render farm. The performance increase was astonishing.

> "A standard 2000 pixel by 2000 pixel render could easily take an hour. . . the same 2000 pixel render now takes about five minutes."
>
> - Kevin Seewer

"Before the render farm, we cringed at some projects," admits Hopkins. "Knowing how big they might be and how long it would take did not inspire confidence. A standard 2000 pixel by 2000 pixel render could easily take an hour or more to render. 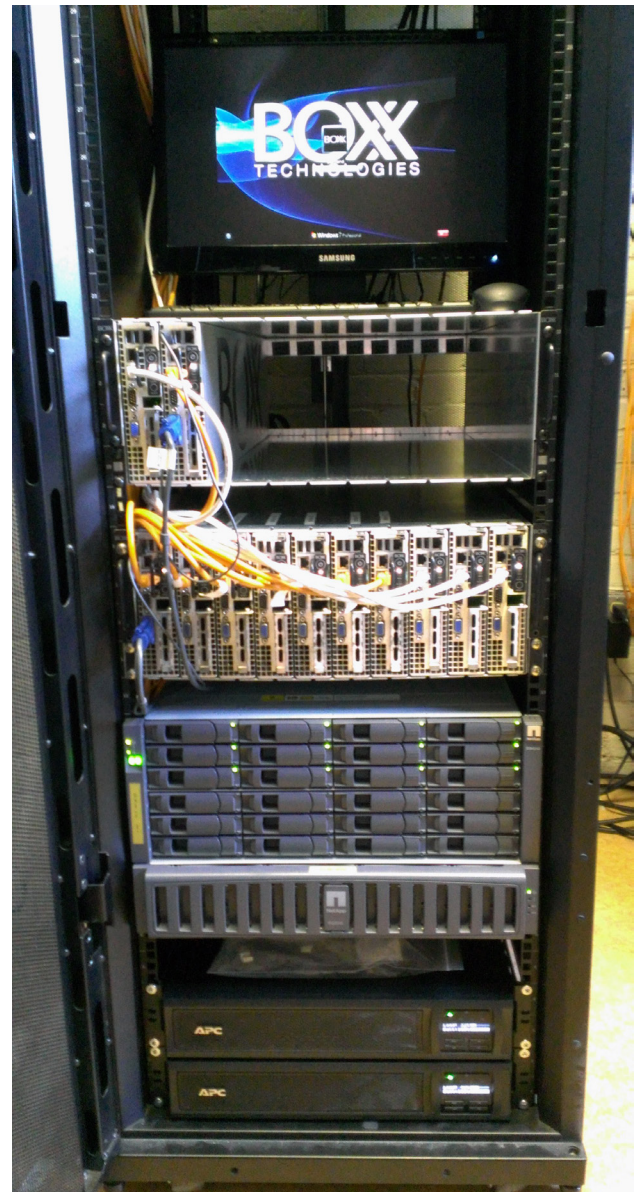 When we were asked to produce board-size renderings at 300 dpi, you suddenly had a 4000 pixel by 4000 pixel image, and then you were looking at anywhere from three to four hours. Add in the fact that there were usually five or six camera views and when you do the math, you get the idea…forever. There was just no room for mistakes. Our render process was something like this: set up everything, region render where you think issues may be, use a light cache preview, then hit the render button and pray. But once we installed the renderBOXX10500 systems, it was an instant upgrade to awesome. The same 2000 pixel render now take about five minutes. The 4000 pixel renders were now twenty to thirty minutes. Suddenly, we had the ability to not only fix errors and quickly render, but more importantly, we could leave work and go home at a reasonable hour."

Seewer and Hopkins are also fond of renderBOXX's space-saving design. "Space is at a premium in our office," says Hopkins. "Our IT room is 8' x 10' and it not only holds our render farm, but it also houses the entire network to the office and the majority of the digital equipment we use to execute interactive retail initiatives. When we considered going with a render farm, this was one of the many advantages of renderBOXX. To have the ability to swap out blades quickly and easily and have them located all in one space - It doesn't get much better."

With the new render farm, IDL 3D was now able to both create and render more complex scenes. It also provided them with the horsepower to take on animation renderings—at first to showcase their talent, then secondly, as a client request. Since then, IDL's team of account representatives has made a concerted effort to showcase the company's capabilities and as a direct result, have been inundated with requests for more work. "From our initial purchase of the first seven render machines we have added four additional employees," says Seewer. "Of course," Hopkins deadpans, "that helped to create another bottleneck."

By February of 2013, Seewer and Hopkins were back on the phone with BOXX, this time adding five renderBOXX

10600 modules. Featuring networked architecture and dual six core Intel® Xeon® E5-2600 Series processors (for a total of 12 cores per module) running at up to 3.6GHz , their new renderBOXX modules, just like the old ones, are specifically designed for intensive 3D graphics and visualization—just the type of design work that IDL produces every day. "Until the purchase of these new machines, we were constantly fighting for resources," says Hopkins. "I'll admit that we still could use more machines, but who couldn't?" Despite their desire for an even larger render farm, both Seewer and Hopkins are quick to point out that the latest renderBOXX additions have the IDL 3D team working quickly and efficiently again. "Every day is a deadline," says Hopkins, "and renderBOXX enables us to make those deadlines, day in and day out. renderBOXX equals happiness."

BOXX