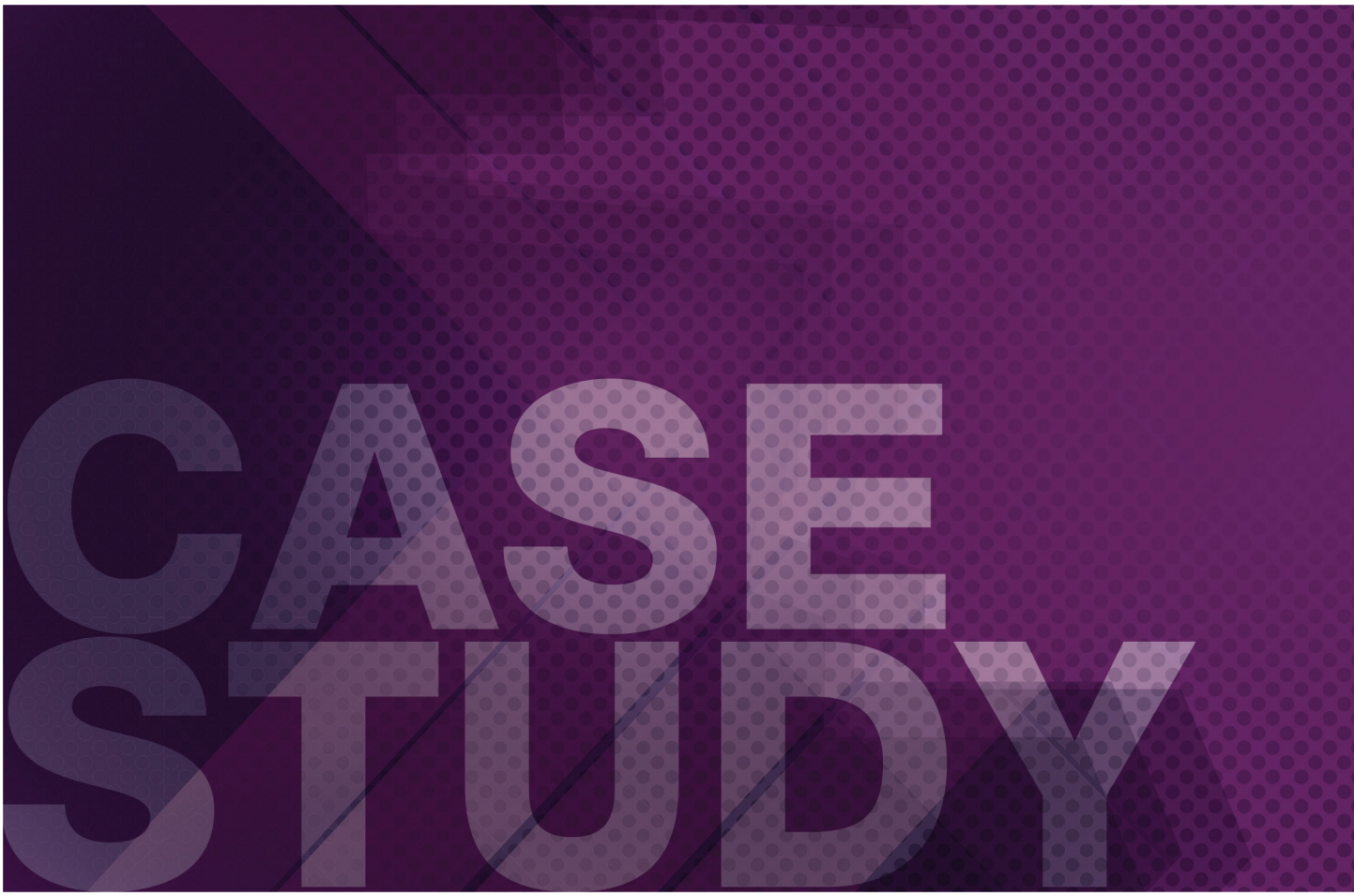
grass valley
A BELDEN BRAND

WGBH Getting *Ignited* and Finding Efficiency Along The Way



CUSTOMER

WGBH, Boston, US

APPLICATION

News and current affairs production

SOLUTION

Ignite Scalable Automated Production System with Katalyst programmable automation panel

Background

For many years, public television stations in the U.S. have relied on grants from the federal Public Telecommunications Facilities Program (PTFP) to help them secure the funds required to purchase new equipment and keep their production facilities up to date. That program has since been terminated, due to the government's current budgetary shortfalls.

However, even with the PTFP grants, many local PBS member stations still have to look carefully at what they spend in order to get the most value. This includes flagship stations like WGBH in Boston — whose award-winning programs are widely viewed nationwide and around the world. It's a tough challenge because, even with less money, the station must continue to achieve its mission of serving the community with locally focused educational programming.

One of the last PTFP grants made before the program ended was awarded to WGBH to help continue its mission. In early 2011, WGBH decided to migrate its production capabilities to an Ignite automated production system from Grass Valley, a Belden Brand. The system allows a single operator to take on several roles required during production.

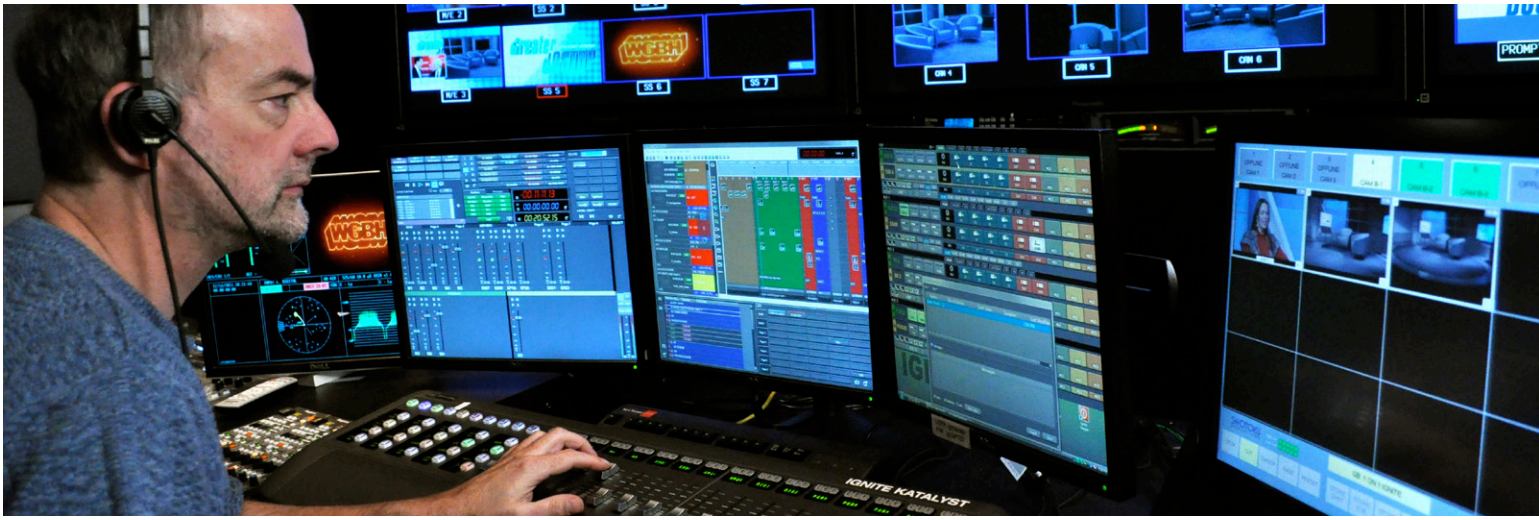
"If you've got lean budgets and you're trying to continue your mission of serving the community, you've simply got to do what it takes to make the finances and production values work," said Joe Igoe, Chief Technology Officer at WGBH. "If the integration and rollout are planned well, this change is not something that will affect the viewers' experience. That's probably the best argument for going with an automated system."

Bring the Teams Together

The move was implemented under the supervision of Director of Engineering Michael Foti and involved bringing the WGBH local production and technical teams together to discuss how they would benefit from a streamlined process. A number of internal discussions centered on understanding the impact the new integrated production system would have on those directly involved with producing the show.

"Whenever you migrate to an automated system, there has to be a cooperative effort with the production and technical teams," Igoe said, "because there are certain trade-offs and workflow changes that have to be made, so the entire team has to be aware of what's coming and how they need to adjust accordingly. We were very careful to make everyone understand that although we have less money to work with, the quality level of the shows had to remain a top priority. People have to support the change or it won't be a smooth transition. In our case, it is working out well."

It was decided that the Ignite system would first be used to produce a popular WGBH news and current affairs show seen every weeknight, called "Greater Boston." The system was installed in August and went live on October 20, 2011. Another public affairs show called "Basic Black," focusing on African American themes, soon followed. WGBH is in the process of selecting a newsroom computer system, so they currently input the rundowns of "Greater Boston" manually about an hour before the actual taping. The show is taped live at 4:00-5:30 pm each weekday evening and broadcast at 7:00.



"I think Ignite has made our technical staff more efficient because they don't have to deal with the latency of the reaction times involved with telling someone what to do and then waiting for them to do it. With Ignite, effects and graphics appear exactly when they were timed to appear, there's no second-guessing or waiting. Shows run a lot smoother now."

Ed Chuk, Director of Production Services, WGBH

This installation had to be carefully coordinated so they could take the production control room offline and install the Ignite system without affecting the daily production of "Greater Boston." They identified two weeks in August and moved the "Greater Boston" production team to the station's larger (main) control room, which includes a Grass Valley Kalypso Duo switcher. The "Greater Boston" team used that second control room for the entire month of September, and then moved into the newly renovated room in October.

The "Greater Boston" control room, which already featured a Grass Valley Kalypso SD switcher, was renovated to accommodate the cockpit layout of the Ignite system's control surface. They completely rebuilt the monitor wall and the right side of the front desk — where the director and technical director previously sat. There was some discussion as to whether they should leave the existing switcher panel in place or move it, but they ended up leaving the manual control panel of the Kalypso in place (in order to run some shows manually if required).

Foti designed the new layout (based on staff feedback) and two WGBH engineers installed the equipment in ten days. This was followed by three weeks of training (by Grass Valley personnel) on the Ignite system. The station's veteran technical directors (TDs) were taught how to preprogram a show using Ignite's Transition Macro Element (TME) architecture that uses "events" to represent production elements — like adding graphics and effects or transitioning to the next video clip.

During their training, the TDs — Foti calls them "super users" — built all of the timelines and effects for the show while a trainer from Grass Valley supervised on-site. Now they simply make a few small tweaks to each show each day and the Ignite system takes over during the live taping of the show (cuing graphics, controlling Grass Valley servers, adjusting camera shots and mixing audio levels) in a highly automated way.

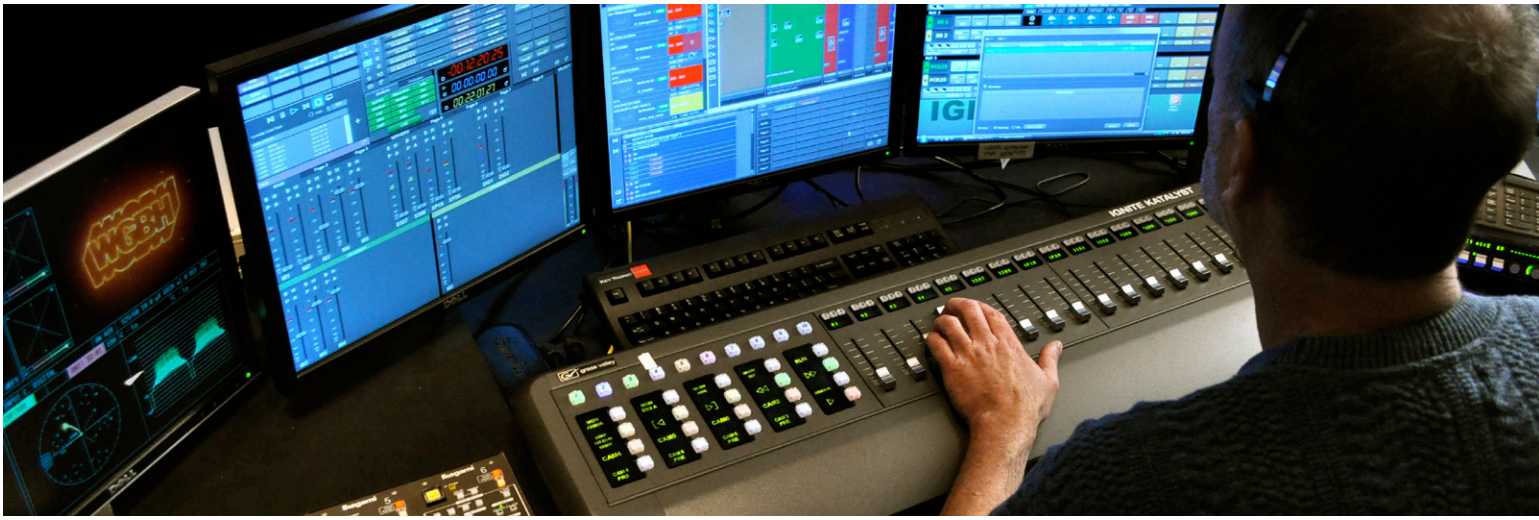
The WGBH studio features six Ikegami 388 SD cameras (shooting in 16:9) on Shotoku robotic pan/tilt/zoom heads that can be used manually as well. Shotoku engineers helped write a special software application to enable the Ignite system to remotely control the head movements of four of the cameras very accurately. The TDs use Ignite to call all of the shots during a show and also CCUs for shading and the robotic camera control panel (joystick) to trim shots as necessary. The Ignite system also controls the faders and channels of an in-house Wheatstone D-9 audio mixing console.

"With Ignite, the production team has to be familiar with what's flexible at the last minute before a show tapes and what is not," Igoe said. "We've got a really sharp team, so training was minimal and our TDs will help train some of our other operators going forward."

The Workload

As far as the production team is concerned, the Ignite system pushes some of the workload to the earlier part of the day — when rundowns are developed for that evening's show — alleviating some of the frenetic rush right before airtime that most live TV shows must endure.

"It's more work during preparation of a show, but fewer people are required to actually run the shows," Igoe added. "We don't feel we've compromised quality in any way."



"That's one of the nice things about the Ignite system. It allows you to retain manual control if you so choose. In some situations, you might not want to turn your entire operations over to an automated system. This allows us to have access to both types of system control."

Ed Chuk, Director of Production Services, WGBH

The decision to keep the Grass Valley Kalypso production switcher intact was also important to accommodate the variety of out-of-house clients that might use the control room in the future.

"Because we might have an internal or external client that might want to produce a show and isn't familiar with Ignite's workflow, we kept the Kalypso control panel available and there's still space for an entire crew," said Ed Chuk, Director of Production Services. "That's one of the nice things about the Ignite system. It allows you to retain manual control if you so choose. In some situations, you might not want to turn your entire operations over to an automated system. This allows us to have access to both types of system control."

He said the Ignite system has brought a number of efficiencies to WGBH, including fewer on-air errors and a smoother production schedule.

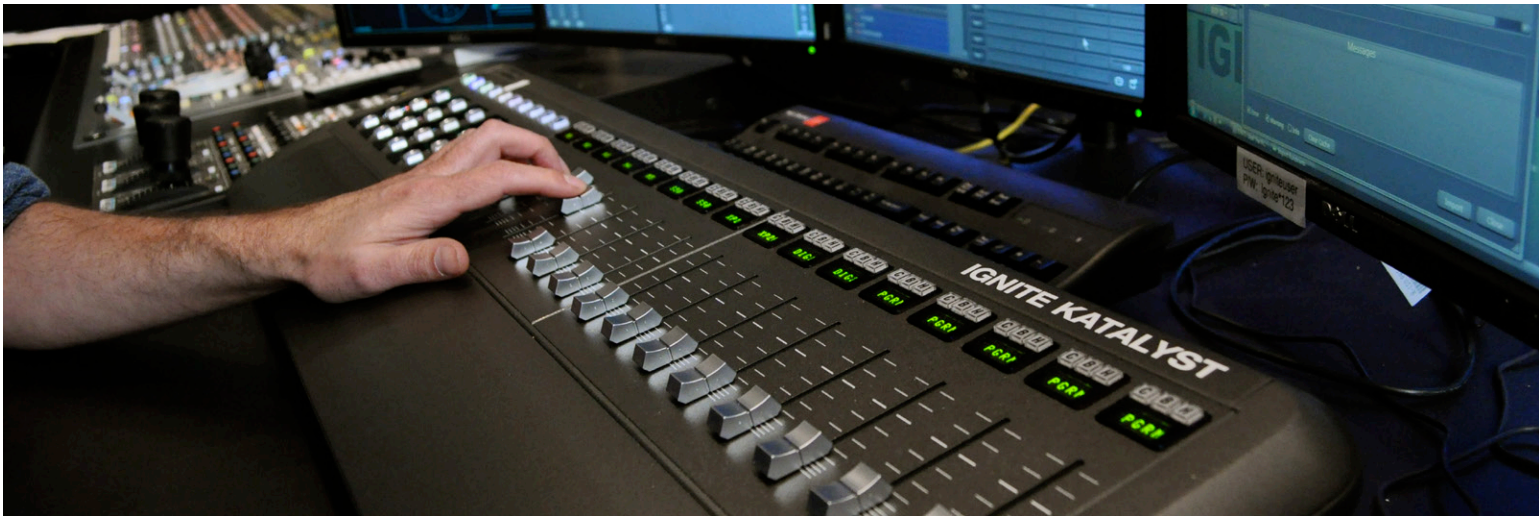
And the cost savings can't be ignored. In fact, Chuk predicts that the number of shows produced at WGBH with the Ignite system — including pledge drives and in-studio talk shows — will increase with time.

"It just makes sense that, with virtually every show in public television looking for ways to cut costs and improve efficiency, an automated system like Ignite will feature prominently in how things are done in the future," he said.

There are also several programming features of the Ignite system that will have a positive effect on the on-air look of "Greater Boston", Chuk said. The executive producer of the show was very concerned that Ignite would change the flow of the productions, which are taped like clockwork. There could be no delays in the schedule. She also wanted to be sure that the quality of the show would not suffer.

"After a few weeks using it, she's now very comfortable with Ignite and how it has streamlined the show's production values," Chuk said. "It's worked out very well."

"Like all PBS stations, we are under a lot of pressure to stretch our budgets as far as possible while still continuing to produce the high-quality programming that WGBH has become known for," Igoe said. "To keep these great shows on the air, we have to do more with less. The Ignite system helps us accomplish that very challenging goal."



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