

The background of the page is a dark, grayscale image of a control panel. It features a grid of numerous buttons and several rotary knobs. A prominent feature is a large, curved joystick or trackball in the center. The overall aesthetic is technical and industrial.

# Automated Production Control

## What's in it for me?

## Automated Production Control – What's in it for me?

Three questions to ask yourself before we begin.

1. Is my facility running with absolutely perfect efficiency?
2. Are my productions as good as they can be?
3. Do members of my production staff have 100% job satisfaction?

If you answered “yes” to all of the above, there may be no need for you to read on. Otherwise, I hope you will continue.

### Background

Our industry, once called broadcasting, has expanded to be about content production. This still includes the dinner hour and late-night newscasts, but now also includes many more over-the-air programs along with digital and social media platforms. All of these different outlets seek to engage our viewers/followers/friends – collectively, our customers – in the content that we believe to be compelling and consequently, include on our various streams. As this transition has taken place, we have also been through two overhauls of the format and technology we must use for television production/broadcasting (depending upon regulatory requirements and sometimes, market size) and are staring down a third. Unless someone backed up a truck full of money and dumped it through your front door, these changes have been undertaken with minimal or no increase in capital budget, no increase (and often a decrease) in staffing levels, and most importantly, no increase (and often a decrease) in revenue. Everyone in our industry is at best, doing more with the same resources and most are doing more with less.

To offset some of the costs of format changes, early adopters in North America looked to staff cutbacks – reductions in OPEX – to cover the large CAPEX required for initially SD and then HD infrastructure. This led first to industry-wide adoption of Master Control (Playout) Automation, something almost all broadcasters use today. In the early 2000s, some broadcasters took the additional step of automating production in news as well.

In the early days of Automated Production Control (APC), there was only one motivator – save money. The earliest of these systems was built to not only reduce the control room (gallery) headcount required to produce a newscast to a single person, but to reduce the required skill set to an unskilled, minimum wage level. These systems met the early goal of reducing cost, but at the expense of both the craft of television production and the flexibility we are used to in the production of live news. Any broadcaster choosing this technology had to decide how – not whether or not – to compromise their production to fit in the constraints of the automation system. For many broadcasters, this tradeoff was mandated in corporate boardrooms and therefore executed, despite the obvious reduction in quality.

The next generation of APC systems, only a few years newer, sought to claw back the creativity and flexibility that had drawn countless professionals to our industry. Adding feature sets specifically designed for “breaking” elements and allowing for the right-sizing of production crews became a focus. Additionally, with the evolution of client-server architectures, these systems were able to provide redundancy that amounted to more than “buy two systems”. Development of these systems was focused on removing the limitations inherent with automated systems and putting the

control back in the hands of television production professionals. To the good fortune of many, adoption of APC didn't take place outside of North America until these newer systems were prevalent.

### How does APC work?

Just in case you aren't aware of how APC works, here's a quick primer.

APC systems take control of some or all of the technology elements in your production. This includes production switchers (vision mixers), audio mixers, video and audio servers, graphics systems, robotic cameras, lighting, routing switchers, multi-viewers, virtual sets and just about anything else you can imagine. In setting up the system, templates are built that contain all of the building blocks you may want in a production element.

Presenter with an OTS left, primary mic at 75%, backup mic at 0%, OTS graphic trigger at 2 seconds.

In pre-production, these templates are turned into shots by adding specifics about what we want to see and hear on screen.

Presenter 1 with an OTS left containing a video package with audio at 15%, primary mic at 75%, backup mic at 0%, OTS graphic trigger at 2 seconds, lower third (strap) with the headline content animating in at 2 seconds and out at 7.

In execution, transitions and additional events can be triggered.

Wipe to Presenter 1 with an OTS left, containing a package with audio at 15%, primary mic at 75%, backup mic at 0%, lower third (strap) with the headline content animating in at 2 seconds and out at 7. On cue, bring OTS full screen and increase audio level to 50%.

Templates are saved with parameters that do not change so that when they are turned into shots, the execution remains consistent. The operator executes the command during playout at a single button press, but the timing and on-air look of the element will always be the same as they are managed by the APC system.

APC systems can work independently, whereby shows are built within the APC system with templates being added to a rundown, converted to shots in the rundown and played out according to that rundown.

In a complete MOS environment, the level of integration gets even better. In an environment with a Newsroom Computer System (NRCS) the APC system can be linked through MOS so that shows are stacked in the NRCS rundown. In this environment, the NRCS has an APC plugin that allows templates to be added to a story slug. When the rundown is published, the APC rundown auto-populates, according to the NRCS list. Any changes made to the rundown in the NRCS are then automatically reflected in the APC rundown, ensuring that the content intended for production is the content that gets to production, in the right order, every time.

## Where is APC today?

Our industry and APC have both come a long way in the 15 years that the two have been intertwined.

- In most of the developed world, television production is done in HD.
- Whether automated or not, broadcasters generally have “lean” production crews.
- Advertising revenues have continued to decline as the number of channels – and even media platforms – have increased.
- Because of global connectivity, television has been forced to keep pace with a 24-hour clock of breaking news.
- APC is mainstream technology with a worldwide, deployed system count approaching 1000.

APC systems today are more reliable and flexible than anyone could have imagined a decade ago. While there are still some systems that are limiting in terms of flexibility, the best in class products don't just allow for flexibility, but actually improve the ability of producers to be more creative than ever before. Systems can integrate with almost any controllable device that your facility has today or may have in the future. As systems continue to evolve, deployment at an enterprise level, using shared resources and personnel will be possible.

## Why should I automate?

Back to the original question and the premise of this paper. What's in it for me? If you answered “yes” to the three questions at the beginning, then the answer is nothing. You have achieved production Nirvana and it just can't get any better. You may also be a Unicorn. But if not, we can address each of the three areas with an APC solution.

### 1. Is my facility running with absolutely perfect efficiency?

If you are like most content producers, you can ALWAYS be more efficient. Even if your team is lean, there will be places you can see an opportunity for improvement. APC isn't just about headcount anymore. It is about doing more with the resources you already have. As the need to follow the sun for news coverage has increased, the pressure on content producers to create additional, compelling content has also increased. That means there is no “break” in coverage and consequently, no break in your need for staff. APC systems that allow for “right-sized” crews allow one person to create breaking news programming that looks as though there is a team behind it while the team is still on the way in.

APC technology also allows traditional broadcasters to add programming – and the commensurate ad revenue – quickly and easily. Because production elements are already created in templates, turning them into an additional hour or more of content per day is extremely cost effective. New programs and even new network streams have been made possible because of the efficiencies that only APC can provide.

APC can have a significant impact on both your top and bottom lines.

## 2. Are my productions as good as they can be?

As your staffing model has become leaner, how has your quality been impacted? Are there more or fewer mistakes on air? How often are you forced to compromise creatively because you just don't have the resources to do something new? What happens if you lose your best people to the competition?

APC can help improve the quality of your productions in at least two ways. First, the flexibility inherent in these systems allows more people to be in the field generating content, rather than stuck in a room stitching it all together. That means that your customer has access to more of the stories that interest them on your outlets and not your competitor's. Second, because templates in APC are all created and rehearsed before being used in a production stream, your crew can create without risk and ensure that what they have created will be clean when it does go to air. This also means that your junior operators can execute a show that looks EXACTLY the same as the one designed and executed by senior staff.

APC can help to increase the quality of your content by adding additional material and reducing human error.

## 3. Do members of my production staff have 100% job satisfaction?

We all endeavor to hire the best and the brightest. And the best and brightest of us try to ensure that our staff is satisfied in their jobs. For production people, one of the key elements to being fulfilled at work is being able to create content of which they can be proud. As our resources have become squeezed by budget constraints, our ability to give our staff free reign over their productions has also been impacted. Additionally, in trying to keep the best people as we have cut staff, people are often under-utilized for their skill set. Does a talented production specialist really find job satisfaction in pressing "next" on a CG keyboard?

APC systems have evolved to a level that makes them more reliable, faster and more predictable than humans. For a production professional, that means I can design an element, test it, tweak it and run it on air, without the fear that it will be negatively impacted by human intervention. This allows the creative person to imagine and implement new ways of displaying content, without limits. It also allows more people to be challenged in their work, by moving the most menial of tasks under automation control.

APC allows production professionals to exercise their creativity in the art of creating content better than manual operations can.

## What's in it for me?

Depending upon your role and motivations, the answers will be different.

Increase Top Line Revenue – APC allows you to add additional content at little or no cost, giving you another property to sell to advertisers.

Increase Bottom Line Profit in a traditionally staffed facility – If staffing is not yet optimized, it can be. With a return on investment in as little as 9 to 12 months, very few technology elements provide returns as quickly as APC.

Increase Bottom Line Profit in a lean staffed facility – APC allows redeployment of human resources into areas that are required, but not necessarily lucrative, such as digital and social media publishing.

Improve staffing flexibility – An APC system that allows automation to be deployed as none, some, or all gives you the flexibility to schedule staff around the busiest times of the day for news gathering and production efforts. Additionally, it provides options for the ways you cover special events, such as elections.

Increase staff engagement and satisfaction – Creative people want to be creative, not constrained. APC provides flexibility that manual systems requiring coordination of many people can't. This in turn allows production professionals to create content that they find compelling themselves. Challenging our human resources in their jobs leads to improved job satisfaction and employee engagement.

Reduce error rates – The pre-production focus of APC ensures that any element that is created for use on-air is built, tested, and rehearsed prior to being seen on a customer's screen, thus significantly reducing the opportunities and instances of on-air mistakes.

Improved consistency from program to program – Because APC is template based, your more senior staff can build the content elements in such a way that they can be played out consistently by any staff member, whether junior or senior, without any difference in production quality.

Redeployment of existing staff – We all need to staff new distribution models such as digital and social media, but where is the money coming from for this new staff? Implementation of an APC system allows staff whose production roles become redundant, to move into new roles created by new industry realities and business models.

Increased content creation – Another area where staff can be redeployed is into news gathering. Having more content is always better than having more people in the control room.

Automation at my level – Some vendors have introduced automation that is scalable allowing the user to enter into the automation space at the price point and functionality that perfectly fits their needs.

Enterprise deployment models – Moving APC into virtual environments has opened up a world of possibilities for the use of the technology within a large facility and in the future, across remote facilities. This can further improve the utilization rates of expensive real estate and technology infrastructure.

No matter your concern, motivation, fear, or goal, APC has something for you. With architectures, feature sets and reliability enhancements that make these systems among the most flexible and reliable in a production facility, APC has become a must-have technology for the modern content producer.

So, what are you waiting for? Production Nirvana awaits you, without the inconvenience of a horn in the middle of your face.

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