

The background of the entire page is a dark, high-contrast, and slightly blurred image of a professional DJ mixer. The mixer's various knobs, sliders, and buttons are visible, creating a technical and modern aesthetic. A thin red diagonal line runs across the top and bottom of the page, framing the central content.

overdrive

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. 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.

Ross OverDrive

And now for a commercial bit.

That second wave of APC systems I mentioned was Ross OverDrive. While the first system, PVTV by Parkervision, was created as a pure headcount reduction tool, OverDrive was created by Ross to be an automation system at whatever level you wanted to automate. GV eventually purchased Parkervision and turned the PVTV product into what is now Ignite. It is better and more flexible than it was at the outset, but at its core, it was never designed with the flexibility and user-defined feature set that is the hallmark of OverDrive. Perhaps that is why subsequent systems from other companies have been built to mimic the user experience that OverDrive provides.

Number One APC System Worldwide

Regardless of the metric, OverDrive is the number one APC system on the market today.

- The system count of nearly 400 units deployed is nearly double our closest competitor.
- OverDrive has qualified* integration with nearly 300 unique devices
- OverDrive has been on the air since 2004, longer than any other existing platform
- While some of our competitors have decided that their APC offering is “good enough” and significantly slowed development, Ross has continued to improve the feature set and reliability of OverDrive, releasing two major, feature-packed versions in the last 14 months
- At the same time as our top competitor was publicly cutting R&D spending by 25%, Ross grew the OverDrive R&D team by 25%
- Best-in-class redundancy, offering not just OD system redundancy, but available fail-overs for all peripheral devices, including the production switcher
- The only APC product “range” on the market – Premium, Prime, Express and Graphite models available – with “penalty-free” growth path from one to the next

*Qualified integration is an important point. Ross does not consider OverDrive to be integrated with another device unless there is an agreement between Ross and the other vendor to support that integration. In many cases, our main competitor in APC uses reverse engineering to essentially “hack” integration independent of the other vendor.

The “Breaking News” Leader

Ross Video is laser-focused on Live Production. At its core, the company ensures that it is always at the forefront of technology in this space in order to create and enhance products that make the live production experience better for users in the field. OverDrive is no exception.

In APC, the biggest concern is what happens when things go sideways. Even the earliest systems did a good job of executing scripted elements in a fixed rundown. But the most egregious compromise to be made in automating with a basic tool was the loss of any ability to manage unscripted or breaking events. For our customers, and therefore for Ross, this compromise was never acceptable.

For this reason, OverDrive is built from the ground up to be able to handle anything the craziest news day can throw at it.

- Inauguration day for the first black president of the USA with live remotes all over his home town? We’ve done that.

- Cutting to a breaking story to lead the newscast with just 3 minutes notice, on launch day, with the first third-party integrated production switcher connected to OverDrive? We've done that.
- Wildfires surrounding major cities forcing up to 36 hours of continuous coverage? We've done that.
- Launching with 18 hours of continuous programming per day for one of the world's major broadcasters? We've done that too, and expanded to 24 hours a day within a few weeks of launch.

OverDrive is packed full of features that make all of this possible, and more are added all the time.

- Smart Quick Recalls – Filters that allow the user to quickly find any element in the rundown for quick access, error correction or flexibility in an unscripted segment – Added in 2017
- On-air Custom Controls – Templates can include macros that allow the user to make decisions about the direction of a story on-the-fly without adding new elements to the rundown
- Multiple Rundowns – OverDrive can have numerous rundowns open at any time, allowing for quick transitions between back-to-back programs or even a specialized tab that contains all of the elements used in a typical breaking news scenario – Added in 2017
- Generic Templates – Allows the show and late breaking elements to be stacked without having all of the information available up front – this makes the last minute additions smaller and easier to handle in a fast-moving environment
- QuickCode – Change multiple facets of a shot from within the NRCS to address late changes
- Floor Director – Customizable UI that allows timing and communication information to be shared in real time with on-set presenters. Critical for live, fluid situations – Added in 2017

Professional Services

Nominally, an OverDrive launch requires 7 weeks from the beginning of system commissioning to launch. It looks something like this:

- Week 1 – Commissioning and Technical Training
- Week 2 – Initial Operations Training
- Week 3 – Customer to build elements required for automation
- Week 4 – Complete Operations Training
- Week 5 – Customer to build elements required for automation
- Week 6 – Ross support of initial rehearsals
- Week 7 – Customer full rehearsals
- End Week 7, beginning week 8 – Ross support of Launch

By leaving the new APC operators to work alone on creating elements and to rehearse in weeks 3, 5 and 7, transfer of ownership is achieved so that the launch process is quite low-stress.

Your trainer is available throughout the process by e-mail and telephone, even in the weeks they aren't on site.

If imitation is the sincerest form of flattery, then I guess Ross should be flattered. When looking at the service offerings of our biggest competitor, the similarity to the program provided for OverDrive

is uncanny. While this roll out has been copied by other companies, the one thing they can't match is the experience and professionalism of our services team. Unlike other vendors who use freelance trainers to help their customers launch with automation, Ross uses only staff trainers for this purpose. Why does that matter? It gives us the flexibility to adjust to your schedule should things change during a project, while still maintaining the continuity of a single trainer wherever possible. And because our training team works together, even when there is a change in personnel, the curriculum, style and methods remain the same. This allows trainees the comfort they need to be successful in learning how to make television in a whole new way.

Product Range

As APC systems had been adopted throughout our industry, it became apparent that the cost of these systems had become a barrier to entry for many smaller organizations. With a minimum price tag of nearly \$100k USD, the initial investment had made it difficult, if not impossible, for some content producers to take advantage of what APC has to offer.

To address this issue, in 2016, Ross introduced the first product range in the APC space. By adding a powerful licensing engine, the OverDrive team made it possible to activate features and functionality at a level so granular that it allowed for the creation of different levels of product offering within the OverDrive family.

OverDrive Express – ideal for smaller productions such as corporate, faith-based and small venues – includes interfaces for Carbonite production switchers, servers and graphics – options available for MOS and other device classes

OverDrive Prime – includes everything in Express and adds DirectControl, support for Acuity and Vision production switchers and additional device ports – options available for MOS and other device classes

OverDrive Premium – includes everything in Prime and adds the full suite of MOS connectivity with other Ross products, plus Multiple Rundowns, Smart Quick Recalls, QuickCode and Floor Director – options available for 3rd party MOS devices

Just launched in February 2018 is the newest addition to the family – OverDrive+Graphite. OverDrive has added support and a bundled package to our class-leading, all-in-one production centre, Graphite. This new bundle includes the Graphite unit, OverDrive Express and the basic MOS tool set, that allows OverDrive+Graphite to make use of connectivity with NRCS systems such as Inception and have the full MOS workflow with the internal XPression graphics and Clips systems.

By creating this range, Ross has removed the barrier to entry for many content producers. APC workflows can be achieved for as low as \$30k USD. And for the old “minimum spend” for APC of \$100k USD, now you get a full production center in a box thrown in with the APC system.

What's in it for me? – OverDrive answers

While generally, APC can provide Production Nirvana, OverDrive provides it at the level you need it, regardless of what that level is. And it does so on the most widely adopted and most reliable platform available. In addition to the previous generic list, there's even more with OverDrive.

Replacement of server hardware every three years with a current maintenance agreement – This is a critical piece of your infrastructure and we treat it that way.

More Breaking News features than any other system – OverDrive has been designed with breaking news in mind. While it already has the most complete suite of features built to support this purpose, more are being added all the time.

Cue-in-Advance – A Ross patented feature, allows the system to look ahead and prepare as many elements as far in advance as possible. This ensures smoother transitions as the show progresses and allows the user to focus on the output, rather than the setup of the show.

More UI options than any other platform – Touchscreen, keyboard and mouse, contextual control modules both physically and on-screen for audio and robotics controls and even custom panels built in the Dashboard control system.

Qualified integration with 3rd party systems – Provides the user and the engineering department with confidence that Ross and the other vendor can and will work together to solve any integration issues.

Unmatched redundancy options – OverDrive allows you to choose the redundancy scheme that meets with your level of risk tolerance and your budget. From a minimal application of additional clients through to the ultimate redundancy scheme with redundant paths to controlled devices and even redundant production switchers, you get to choose.

Legendary Ross technical support – Ross is famous for having the best tech support in the business. That comes included with your purchase of OverDrive and remains included for as long as you own the product.

Membership in the largest APC users group in the world – Our customers are the engine that drives OverDrive forward. Most of the features and functionality that is in the product today has been requested – and sometimes designed – by users of the product.

So again, I ask, what are you waiting for? Not only is APC the answer to many of your concerns, Overdrive is the answer to many of your questions about APC. Our team looks forward to working with you as you become part of the OverDrive family.



Ross Video has a complete range of technical services available to ensure that your OverDrive installation is a success.

Operational Training can be provided at Ross Video, on-site or on the web. Experienced Ross operators will teach your staff to get the most out of your new system, and enhance your productions.

Commissioning is a service to help get your OverDrive system properly configured, connected and installed. This service is performed by factory trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

OverDrive comes standard with a 1 year comprehensive warranty. Extended Warranties on hardware and software maintenance are available for an annual fee.

Technical advice is available on-line, by telephone, or email to Ross Video – Included for the life of your product.

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