

Building Agility Through Interoperability with Grass Valley

Matt Stagg in conversation with Adam Marshall, Grass Valley

IAMT Studio Visual Podcast Series

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I have a very special guest for you today, Adam Marshall, who's the chief product officer at Grass Valley. We've had a long chat in this briefing, and we're going to continue that here, so you can start to understand a bit more about what it means when we talk about openness. And Adam, if you could just explain what your role is and where Grass Valley are taking these initiatives.

Yeah, thanks. So my name's Adam Marshall. I'm the chief product officer at Grass Valley. And that means I'm responsible for the product strategy and direction across our entire portfolio. We actually have one of the largest portfolios in the industry for everything you need to do media production. And I say media production in the sense that, yes, of course, we're a major vendor and supplier for the broadcast industry, but increasingly that's also for your enterprise markets and extended markets as well. And that consists of everything across hardware and software for cameras, switchers, playout systems, content management and the works in here as well. And I think the openness in the industry is a key piece, right? I think many of our customers have been sharing with us that there is an absolute need and desire for greater interoperability between vendors in the marketplace.

But at the same time, there's also this rapid transformation towards how to be more efficient, more agile, more dynamic with your media productions — not flexibility for flexibility's sake, but because the economics of media production continue to be challenged, the revenue model in the marketplace. So this is a fantastic opportunity, I think, we have at this time, with the technology innovating like it is, to really rethink how we build and deliver the infrastructure and the core solutions, whilst also enabling creative professionals at scale. So the Dynamic Media Facility is a key part of that.

And I think one of the things — when you go back, we're all from broadcast, and it used to be, "Here's a box, and here's another box. Just make them talk." "Yeah, well, we could do this. We need a new cable, and we need a box in the middle." And that's the broadcast industry. We make stuff work. But now, how do you get that software, which you can't see — how do you make it talk to that software? And is that where you're starting to look at, and get that knowledge — almost, I guess, the KPIs for the technology?

Yeah, it's a great question. I think, as you say, as broadcast engineers and professionals — I'm an architect ultimately, at my heart — we pride ourselves in the ability to pick best-of-breed solutions and make them work together. But if you actually look at other markets, most don't work that way. Because actually the cost of the integration work is often, okay, a hidden cost, but fundamentally it is a significant cost of the delivery. You would take many man-months of time to be able to develop and deliver those systems.

Especially when you want to pull something out the middle. Yeah.

Absolutely. So I guess the benefit that the software solutions bring is that you're not having to wait for delivery and procurement and such — obviously you do for any host infrastructure and compute, but cloud obviously helps you to do that as well. But more importantly, I can pick best of breed from different vendor solutions and run them together in a software-defined space. The challenge we have had up until recently, though, is that those applications exist on different containers, different host infrastructure, whatever it may be. And yes, we use those brilliant technologies of SMPTE 2110 or SRT or NDI or whatever flavour of transport you want to use. However, that has a complexity in terms of the control routing. But it was also a challenge for the compute itself. Computers don't like to work in perfectly timed precision, repeatable one to the next, in the way we expect SMPTE 2110 to behave, perhaps.

So that was a key driver that we had within the AMPP platform. We had to find a solution to it, and that has been the foundational idea that then was formed into what MXL is, in the Dynamic Media Facility — so, the Media eXchange Layer. This is not a GV-owned initiative. This is an open standard — and it was not even a standard, in fact, it's an open SDK, powered by the Linux Foundation project, with key vendors, of which Grass Valley and Lawo and many others are part, contributing to an SDK of: this is how you read and write flows and grains and streams into memory — shared memory — for different applications to pick up from. Now, without going into much more technical detail — we can do, but for time — the point of that is that you can have multiple containerised applications on the same block of compute, and because you're not doing encapsulation/decapsulation, going out of the box and back, it allows you to run them side by side in the most efficient way.

What that means is that clients who have adopted this at scale, like DMC Production — which is Ziggo Sport in the Netherlands, that we've spoken about before — are able to take what was maybe 40-plus racks of equipment in the past and run it in just 20 Dell servers, right? Of course, any vendor server for that matter as well. Likewise, we have other organisations that are just rolling out entire remote facilities in two servers in a little flypack, and laying an entire OB provisioning in that space. That density for live production — and of course it would also reflect in playout and content management — is unthinkable 10 years ago. But it is a direction of travel that's been driving, and I think with MXL being there — driven in part by GV — and with that DMF as well, it allows us all as a vendor community to progress on this bandwagon of this trend at a rapid pace. And we've really seen so much interop demonstrated here at NAB with the Interop Labs.

Yeah. And you do see it in other areas. And one thing — Grass do so much, they're the Nestlé of broadcast. You make everything.

I'm going to use that.

You can try and boycott us, we make everything. That was a Nestlé strapline I think I made up. Anyway, do you think because you have so much in your workflows, so many things, that you had to do that internally, and that meant you'd already had some of that knowledge to be able to do it with external vendors in the MXL?

Yeah, I think if you go back to the heart of it, I think it was 10, maybe 11 years ago that we started on this journey, and it was really focused on — we see a need to truly revolutionise how

you do media production in terms of the core infrastructure, the way you orchestrate, how you handle identity management, all the rest of it, by taking on learnings and steering from best practices in the IT domain. That's what it really comes down to. Because none of this is super secret squirrel, magic sauce or anything. I mean, there's some fantastic tech in there. I don't want to diminish that at all. There's a lot of hard work that goes into it, but fundamentally it's based on core principles of IT, and also what we have already. So MXL's JT-NM reference model, right? It's standards-based and leveraging the best of what we have today, and then improving what is needed to make it work.

Yeah. And I think — I've seen it in my time, where you talk about alliances and working groups and stuff, and you get some people going, "Well, I don't want to work with my competitor." And innovation grows if you have a base layer that you all understand. It removes fragmentation, which leads to complexity, and the techno-economics of fragmentation are great, but if you know it's going to work, then it's quicker to do innovation on top of it, so everybody wins.

So you were saying about the broadness of the portfolio, and it speaks to that point as well, right? So if we're going to truly make the whole content production workflow chain faster, more responsive, more dynamic, we had a fantastic position in the sense that we do everything, so we have the greatest opportunity to improve the entire life cycle of the content management. Another vendor, or a smaller vendor with just one point product, is constrained by what they do only, and that's fantastic for them, but they can't truly look at the broader picture and how we manage it. But as you mentioned, alliances is a key element of that. An open-by-design approach is a foundational principle that we hold at the top of our priorities. And yes, competitors to Grass Valley and Grass Valley alike coexist on the same infrastructure. It has to.

Because clients and partners and customers want to still be able to pick the solution from the vendor of their choice. And what is best of breed for one client may be different from best of breed for another client, because fundamentally that could be commercial or it could be technical, whatever it may be. And we need to offer that choice. And I think what we're doing with our platform provisioning in AMPP, and other platforms that will be coming along from other vendors — I'm sure some of which will be messaged and announced — that principle is a critical piece to ensure that both the production teams and the engineering teams can continue to do what they do best, because broadcasting's such an innovative and specialist, nuanced business. You need to have the ability to do that.

Yeah. And the analogy sometimes when I'm trying to explain it — because we have to take it back to tin — is: it didn't used to have a standard rack size. So you would buy something from X Telecom, you buy something from Ericsson, you buy something from Nokia — they're not even in the same rack. So you can't put it in a data centre. Now, when everybody went to the standard rack size, all of a sudden it was easier for them to get stuff in, and it is that base layer that lifts everybody up.

Well, unfortunately you still see a few solutions out there with one-and-a-half rack units.

Yeah, no, I know. I've had them. I've done some data centre planning in a very old life.

But you're absolutely right. So I think having a standard there really enables the acceleration of it. And again, I just want to be very clear that MXL is not a standard, it is an SDK, but it's because it's an SDK that it's been able to actually deliver the change at the pace it has. Because

rather than everyone interpreting a specification and developing against it, and then understanding through Interop Labs whether it worked or not, an SDK actually does the work for you and ensures total interoperability, which is why we've had such a rapid explosion of other vendors and marketplace leaders joining those MXL Interop Labs here at NAB, because they've been able to drop them in weeks of development, as opposed to months and years of development. But I think the key element there is the ability to plan out with any vendor solution, to be able to run on a core principle of orchestration from one platform or another — that really accelerates change for the organisations too.

Because you can build your own service and then deploy these all individually. But again, that's integration development work. And what I see, and many of our clients who are using the services are seeing, is that by using a common platform for their core infrastructure, their live production, content and playout, and all of the apps from all those different vendors that exist on there, they can design, deliver and then produce content at a pace they've never been at before. So DMC Production again — I'll use them as an example. They had to go live with Ziggo Sport in six months from getting the keys. Three months of that was —

Turning a general office building around into a production facility.

Yeah. And three months was —

Three to four.

Yeah, absolutely. And then three months was the design and implementation. So nine to 15 control rooms, depending on the configuration at a given time of day. So up to 15 control rooms, editing, content management, voiceover, MCR, 11 playout channels with HD HDR — all created and instantiated in under three months from start to on air. That's just insane speed of evolution, and it's only possible with these new technologies.

We're going to have to wrap up. But if people want to join MXL — which, we're going to have lots of people looking at this, not just members here, people who've not ever heard of it — what's the best way for them?

So the best example in production today of all of this in play is what you can see on our Grass Valley stand — C2408 — and of course that is on our website, and we've got social marketing material off the back of the show as well. The AMPP platform is the Dynamic Media Facility concept in production today, which is fantastic to see. And as the Dynamic Media Facility evolves in its definition, those capabilities and those standards, whether it's NMOS or whatever it may be, will be implemented back into the core platform, so it remains and continues to iterate for that interoperability at scale. Likewise, if you want to be part of either MXL or DMF in any way — MXL is on a GitHub repository that's publicly available, and you can contribute to that. The standards and specifications are there. I think most of those who watch this are probably going to be more interested in the Dynamic Media Facility itself, which is the broader aspect.

That is EBU-led, with AMWA and of course NABA and other industry standards as well — be it an AMWA initiative with EBU. That's available for anyone to partake in, and if you check out the EBU website, they'll have those details. But of course, again, if you want to see it in action, or you want to find out more and you want to understand how this really works under the hood and the benefits it really delivers, come by and check out the Grass Valley team.

Brilliant. Thank you so much, and even if it's not your thing, go to the Grass Valley stand because it looks amazing.

Yeah. Thank you.

And it's worth a look. So thank you so much again. I'll be back with more later.

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