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ausbiztv Captures the Market with NDI

WITH A DEPTH OF EXPERIENCE unmatched by any Australian media start-up of recent times, ausbiztv has hit the ground running to launch a dedicated streamed business channel from a greenfield site using cutting edge technology and workflows.

Lead by Founder and Managing Director, Kylie Merritt, whose previous roles include CEO of the Nine/Australian News Channel joint venture, Your Money, and Digital Operations Director with Sky News, ausbiztv aims to provide live coverage of Australian business and financial markets during the trading day.

"After the closure of 'Your Money' which I was obviously heavily involved in and prior to that Sky News before, my view was that there still a lot of demand for live coverage of, particularly the Australian market, but Australian business more broadly," says Merritt. "A traditional television model is just really hard to make work just with the cost involved because while there is still a demand for this sort of content, it is a very niche audience. This is not a mass market. So, to make it work you need to be able to come up with a business model that can still provide that live coverage."

According to Merritt, ausbiztv will launch with six hours of live programming and quickly scale to eight - eight and a-half hours. To achieve that goal, the channel looked at removing many of the costs associated with traditional broadcast television.

"So that's what we started working on," she says. "A streaming platform with its own app and its own web app and some other distribution platforms that can be operated by a team of business journalists."

That team includes a who's who of Australian business journalism such as Nadine Blayney and Ingrid Williams, formerly of Sky News and Your Money, Sydney Morning Herald reporter David Stack, former trader Daniel Weiner, and long-time finance guru/morning television personality David Koch.

"We've got a staff of 16 all up," says Merritt. "And what we wanted to build was a workflow that allowed journalists to really concentrate on journalism and on the content, but at the same time actually be physically able to produce all of that themselves and to put it 'where' themselves. And, to follow the content right from them having an idea about what they wanted to do through to actually executing that into a live streaming environment and then through to further curation of that content across various social platforms. So, we don't have studio crews. We don't have separate digital teams. The same person is essentially responsible for a piece of content throughout the whole chain."

The ausbiztv team [CEO Kylie Merritt far right].

Located in the recently completed International Towers in Sydney's harbourside Bangaroo precinct, ausbiztv has constructed two brand new studios to cater for both its own live production and pre-recorded programmes, along with third-party bookings.

"International Towers is one of our partners in this," says the ausbiztv Managing Director. "We've actually built two studios in Tower 3. The idea is that there is a news studio which is obviously where the live stream comes out of eight hours a day. And then, adjacent to that, is a commercial studio. It's very modular. You can use it for a whole bunch of different things. We will do, for example, our 'Startup Daily' show out of there every afternoon, but most of the time it will be available for our partners and clients to create their own content which we will help them do.

"So, we will become a little bit, I guess, like a quasi-in-house studio for all of the residents of Barangaroo. There are three towers along here. So, it's a really simple little way for them to make video content that's cost and, also importantly, time efficient. But that studio will be available for commercial hire for anybody.

"Our private market is really financial services and those kind of in the corporate space. We're not going to be making reality television in there. That's not really our area of expertise. But we would be working with, for example, some managers and stock brokers who might want to come in and do a weekly or quarterly or even an annual update for their investors. We can help them create that because we understand their content. That's kind of all we do. So, we're pretty focused on that."

The revenue model for the channel is neither advertising sponsorship nor subscription, instead much of the funding will be driven by hire of the second studio.

"We took the decision not to go down the paid subscription route," says Merritt, "just because it's a very long investment cycle and the cost of acquisition is very high and I come back to that point I make about this being a very niche service. So, before you've even begun you've said, 'Okay. Ninety percent of the population is not going to be interested in this content anyway'. And so, from that 10 percent, you've then got to find enough people who are willing to pay for it. So, our content will be available free. You will have to login. So, there's some data in there. Phase two of the business centres very heavily around how we can use data to provide content and also investment opportunities to our users. Advertising we will post but it is not the core of our model. We don't have a big sales team that goes out and responds to agency briefs. Our kind of revenue model is essentially content. So, if you think about that second studio, for example, being used fairly continuously to turn out content for our partners, that's kind of how we're funding the business. It's almost like a business-to-business subscription model."

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Vizrt's Viz Verdi studio automation platform.

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THE BUILD OUT

Integration for the ausbiztv project has been undertaken by Amber Technology. According to the company's Project Manager-Media Systems, Sean Frazer, "We've done the high level and technical design for the facility for the broadcast componentry and then supply of a portion of the equipment, and then liaising and coordinating with a range of vendors to stand the system up.

"There's two studios. One is a live studio with a permanently rigged set for news. It's got the ability for four people, or four hosting positions. And then there's a second studio, which is more for post sort of workflows, pre-records, some basic interview capability. They'll be looking at doing some webcasting out of that studio. That's got a soft set and a green screen.

"The facility is built around the NDI protocol, and I guess there's a few parts to that. The first part is the Vizrt infrastructure. We're using Viz Verdi, that's got Mosart and all the rundown automation connected through a cloud instance of 7Mountains' DiNA, which is what we're using for NICS.

Viz Verdi is Vizrt's recently launched studio automation tool and 44-input, software-based production switcher. Viz Verdi with IP-based infrastructure and NDI enables ausbiz to produce and re-purpose content across a variety of platforms. The channel will also make use of Viz Pilot Edge, the latest version of Vizrt's newsroom template graphics solution. This will help ausbiztv journalists create, manage and deliver high volumes of Vizrt graphics, videos, and maps. All elements are rendered by the Viz Engine real-time compositor which visualises the complex financial data coming in into informative and visually appealing graphics.

"Up in the cloud we've also got Mimir," says Amber's Sean Frazer, "which is going to serve as the platform archives. And that provides a lot of AI capability, things like image recognition, speech to text, all the stuff that you'd see from your Microsofts and your Amazons in the way of AI tech. And then we're also using Vimond IO up in the cloud, which they're using for production editing. That's all working off Amazon S3 and that's all integrated into the on-prem system.

"Back on the ground, we've also got VizEngine, VizClip Players, all that sort of stuff for news-based playout workflow. And then containing that or enveloping that is the NDI network. We're using very little SDI. I think we've only got SDI feeds going into some Elemental encoders. But apart from that, everything else is GigE using the NDI protocol.

"For cameras, we're using BirdDog P200 PTZ cameras. They're all in NDI. We're running through a central HP Aruba network stack. One of the other things that we're using that's kind of new, I think we might be the first one to go live with it, is going to be the BirdDog Comms and BirdDog Central. We're using BirdDog Mini HDMI encoded, but also has a Comms interface on them, so that's going to be providing Comms and [ISB?] for the talent in each of the studios. And obviously managed through NDI and feeds into Viz, out of Viz, with the ability of routes through BirdDog Central.

"There's a couple of workflows that we're looking at, dependent on whether they're live or whether they're using the second studio. The first studio being permanently set, the camera positions won't be changing, so those camera pre-sets or shots will be saved in automation, that they can always recall that through the newsroom template, and then everything is automated downstream. The second studio, which isn't necessarily used for as much live stuff – we've got a little bit more flexibility in where we can move the cameras, we've got PTZ controllers, the BirdDog PTZ controllers going in to drive that, and we've also got a level of control through the TriCaster as well.

"There's also Autocue prompters via NDI, so we're encoding the prompter output. Basically, every video source would be available to route to any NDI compatible decoder within the facility. And then we may at some point in the future look at widening the reach of the NDI stuff, maybe using BirdDog Cloud to distribute or receive content from remote sources."

According to Frazer, remote connections used by the channel will be a mix of fixed and ad-hoc

"Remote feeds, we're managing through Skype," he says. "So, we've got a Newtek TalkShow that's going in the second studio, which is the non-live studio. We've got a TriCaster 410 Plus. And we've also got LiveU going in for remote connectivity into some of the clients that we'll be connected with."

"There will be a few fixed locations for regular customers that we'll be crossing to. There is a lot of ad-hoc sort of people and, particularly with the challenges that we've got with COVID-19, there's been a real emphasis on remote connectivity and how can we quickly connect to people, so that's where the TalkShow is coming in and I think the 4000 gives us the ability to manage up to four concurrent Skype sessions, not that they'll be doing three-ways but at least they can have maybe two up and then have a third lining up or something along those lines. It's giving us that flexibility to be able to connect as quickly as we can."

Streaming from the studios will be handled by a pair of AWS Elemental encoders pushing the resultant stream to live streaming production company Corrivium, also located in the Bangaroo precinct. Connectivity for the ausbiztv facility has been enabled by fibre and network solutions provider, Vocus. Vocus is delivering a suite of data and voice services, including Vocus' Enterprise Internet, Internet Express, Cloud Connect, and unified communications products.

"Corrivium are developing all of the front-end interfacing and the streaming back-end," says Sean Frazer. "They will also be recording the studio output, which will then get recorded and stored in Mimir, which will give the AuzBiz team the ability to clip up and then bring that down to reinsert it back into the rundown and that side of it too."

"I think we're kind of breaking ground on a lot of new products," comments Frazeer. "The Viz Verdi is obviously new to market and the BirdDog stuff, particularly with Comms and Central, is new to market. There's a reasonable amount of new tech and obviously the risk that comes around that when you're trying to introduce new technology. But, at the same time, it reduces the amount of cable infrastructure that we've got to pull in and I guess enables a lot more remote production."

NEWSROOM WORKFLOW

As well as Vizrt automation and graphics, the Scandinavian tech flavour at ausbiztv extends itself to the DiNA newsroom system from Norway's 7Mountains, and Mimir cloud programme archiving from sister company Mjoll.

In 2019, Ausbiztv founder Kylie Merritt and Head of Content, Nadine Blayney, approached Stem Media, the Oceania distributors for 7Mountains and Mimir, to see how they could do television in "a really light way".

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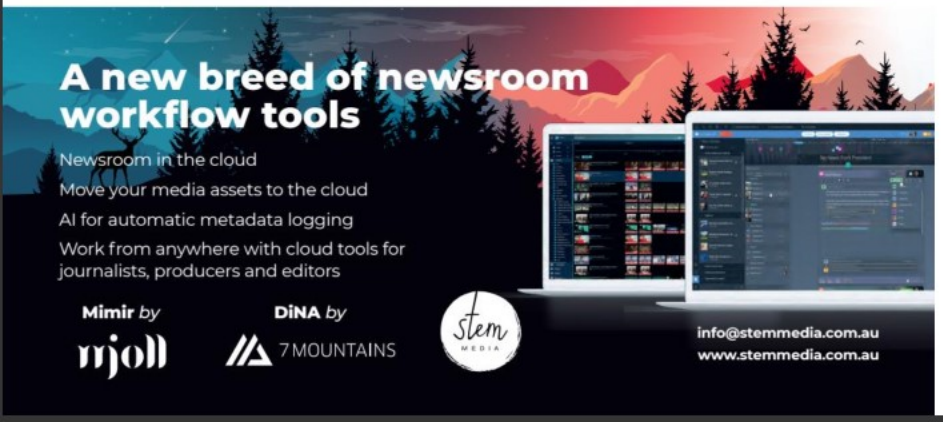

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According to Emily Dawson, Director at Stem Media, "They didn't want to have huge on-prem systems. They didn't want to have the huge clunky environment that requires a huge amount of people to operate. And, I guess it was kind of a really good time to start thinking about that because cloud-based workflows are becoming more common, people were starting to talk about it.

"They also wanted it to be very much that their journalists were content creators, they weren't just TV people or social media people or online people. We had just taken on DiNA and Mimir into Stem Media as Oceania representatives and we sort of showed them the products and we headed over to IBC and started talking with 7Mountains' sister company Mediability, which is Norway's largest systems integrator, about how something like this might come together.

"At around the same time, Vizrt launched their Viz Verdi system and we thought that could possibly be a really good solution, quite budget conscious, and it allows producers to take their content right from the start and, obviously, the studio automation makes it possible for them to put it to air as well. That was the ultimate goal, to have very few technical people, and to enable the journalists with the latest technology that's available, enable the journalists to do the entire production workflow from start to finish.

"Then we brought in Amber Technology to do the physical integration, so with all the journalists' workstations and all the monitors and touch screens, and all of those other physical servers and things like that. Sean Frazer has managed a project on that side of things as well. We're even going to have the presenters have the ability to use Mosart as well, so they can bring up their own graphics when they want to as well, so they're very much involved in the final look and feel of what it is on air too.

"Essentially the idea is – the ultimate goal with DiNA is to make it a one-stop shop for a journalist, so they're able to do everything inside of DiNA, so they can attach all of their vision, they can attach their graphics, they can publish to every platform that they need to publish all from within this newsroom system. And, it's fully cloud-native as well, so they can work from home if they need to. There's the rundown and the television component of it. Then there's also CMS publishing, social media publishing all from within this system. I know it's a buzzword at the moment, but is exactly what we're going for there."

According to Dawson, the DiNA newsroom system is integrated with Mjoll's Mimir archiving platform.

"That actually sits in a panel inside of DiNA," she says. "They go out to edit in Vimond IO, and Vimond sends it to Mimir. And then, inside of DiNA, they have a panel on the right-hand side where they just click on that and they can grab their files and attach them into their story in their rundown. With the Mimir system as well, we're setting them up to have auto-transcription with things that are ingested for the VOD and then they are able to download SRT files, create all of those kinds of assets automatically from the system too. I think the transcription is what they will be using the most of in order to make it searchable inside of Mimir.

"Our technology brings us to the point where it's sent to be encoded. And then from there on, the live streaming part and all the CMS is taken care of by Corrivium and Studio Hi, who are creating the CMS as well. If you talk about it from start to finish, it starts in DiNA, all the creation is done in DiNA. Then it goes into the studio, the journalists put it to air with Mosart and Verdi. Then it gets sent to the encoders. And then, when the journalists publish their VOD, they also publish it into Mimir and then the CMS retrieves it from Mimir, which is essentially an S3 bucket, so all the systems are looking at the same S3 bucket, whether that be ingest, edit, archive. That's pretty much it from start to finish."

BirdDog CMO Eamon Drew with the company's P200 PTZ camera.

THE NDI ANGLE

According to Eamon Drew, Chief Marketing Officer with Australian company BirdDog, the ausbiztv installation is a milestone for the adoption of NDI (Network Device Interface), the royalty-free software standard developed by NewTek to enable video-compatible products to communicate, deliver, and receive broadcast quality video over 1GigE networks.

"To be completely honest, this is like a dream come true installation for us," he says, "not just because it's such a high-profile customer, but more because these guys have gone all in on NDI and NDI is sort of the technology we based our whole company on. It's an IP video format. All of the cameras are connected via NDI. All of the audio intercom is connected via NDI. That all goes into an NDI-based switcher. There's very little SDI cable in the whole installation, so it's sort of a dream come true for us in that it's a completely SDI-free installation on all IP video, based on this NDI technology that we've been so heavily involved in.

"It can run on any sort of networking, but the great thing about NDI is it's sort of that great cross point of compression versus quality. It's about 140 megabits running at 1080p/60 and obviously you can go up from there. You can run six or seven streams of full NDI at 1080p/60 down to 1G with ethernet cable. From there, if you need to scale, if you start talking 10 gigabit, then you start talking 60-70 streams and you can sort of scale up. There are certain installations around the world that have over a thousand streams on a single network, so it can definitely scale."

As well as BirdDog PTZ cameras, NDI encoders and decoders, and audio intercom (with Dante support enabled), BirDog's Central PRO software routing platform, ausbiztv also employs BirdDog Cloud which enables remote productions over the public internet using SRT, the open source connection protocol developed by Haivision and Wowza.

"It maintains a really nice connection, even on multi-networks," says Eamon Drew. "Our BirdDog Cloud uses that and through the cloud, you can do PTZ control, tally, audio intercom and you can even do shading of our cameras over the cloud using our control protocols. Then to send a confidence monitor back to the talent, you can use WebRTC (real-time communications protocol), which sends back a really fast way for the on-air talent to be able to view what's going live to air.

"We've had a lot of traditional broadcasters dip their feet into the waters of IP video and NDI around the world. A lot of them have sort of gone with SMPTE 2110. But, around the world, we're finding that NDI is being used, in terms of the sheer numbers, by more and more broadcasters, and then the smaller scale productions as well. I think over the coming 12 months we will see a huge uptake in NDI technology as people try to move away from what we would call traditional broadcasting, in a sense of having these studios where everyone goes into the one location.

"And as the world's becoming more disparate through this COVID-19 crisis, people are trying to find more and more ways to do remote productions and find more innovative ways to get things to air. I think the next 12 months will see a huge uptake and a huge ramp-up of people adopting NDI technology."

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