

BUSH-WHACKING WITH ABC RADIO'S AM PROGRAM

As part of the ABC's 75th Anniversary celebrations, ABC Radio's *AM* team recently hit the road for a series of broadcasts with a difference. ABC Radio Current Affairs Technical Producer, Alan Arthur, was in the thick of it...

Text: Alan Arthur

Photos: Jane Wilson & Alan Arthur

► There are no line arrays, big consoles or fancy mics at these gigs, but there is a VU meter, an Australia-wide audience with a daily reach of around one million, and a global audience through web streaming, podcasting and the short-wave of Radio Australia.

In 2007 the Australian Broadcasting Corporation turned 75 and *AM* – ABC Radio's flagship current affairs program, heard Monday to Saturday at 8am on your local ABC – turned 40. As part of that celebration we took *AM* on the road to do some outside broadcasts (OB) from remote locations in the Northern Territory and Western Australia.

ON THE RO-AM

The first OB was at Maningrida, on the Arafura Sea in Arnhem Land, the biggest indigenous settlement in Australia. Planning was already well underway when Prime Minister John Howard announced a national emergency in indigenous settlements and we found ourselves in the middle of one of the biggest political stories of the time.

ABC Radio hadn't tried taking a highly scripted program like *AM* – that requires a constant word processing link and phone line between the

control studio and the OB site – to such a remote place before, nor had anyone broadcast from Maningrida before. It's remote but not as isolated as it used to be. Satellite broadband had recently arrived and CDMA phones are already in use there, but it was too remote to get Telstra to put in an ISDN line for us that wouldn't cost more than using satphone ISDN.

It was my job as Technical Producer for ABC Radio Current Affairs, to put an OB kit together for the occasion. This included some new Beyerdynamic DT290 headsets and a Tieline Commander G3 field unit to act as my main OB mixer/codec. But right from the start things didn't exactly go to plan. I initially had trouble getting the Tieline mixer and the Nera World Communicator GAN satphone talking to each other over the G722 algorithm [a digital compression format that gives you a generous 7 – 10kHz bandwidth] so I tried out a GlenSound GSGC24A ISDN mixer/codec as well. We also had trouble getting the GlenSound mixer to talk to the satphone. All these specialised devices were going to be crucial to our ability to broadcast the program remotely, so I immediately sent them off to be checked over.

I got them back a couple of days before leaving

and found that the satphone was now working with the Glensound but still didn't talk to the Tieline mixer on G722. In the flurry of final preparations, I ran out of time to sort out the Nera settings and get the two working together but I could use the Tieline for a POTS (plain old telephone service) link and the Glensound mixer with the satphone. There was going to be so much winging it on this expedition, I figured a few additional 'unknowns' wasn't going to matter.

ARRIVING IN MANINGRIDA

Driving into Maningrida from the airport didn't do much to allay my fears. We drove up to the building I'd arranged to broadcast from and immediately realised it would be a logistical nightmare. We quickly went off in search of another location. The next site had a second-floor balcony with an adjoining boardroom. Amazingly, the room had been wired for satellite broadband the week before, though there were still some teething problems. There was an analogue fax line downstairs and the awning had an excellent line of sight to the Pacific region Inmarsat satellite.

I connected up the satphone and the Glensound dialled through first time to '212', our control room studio in Sydney. The Tieline was plugged into the fax line for a POTS link. The POTS algorithm allows you to send digitised audio down an ordinary phone line. If you obtain a good line all the way back to base, you have a good broadcast quality signal. The Tieline dialled through to 212 no trouble, but wouldn't train up to a high enough bit rate. The satphone was giving me a much better quality signal, albeit at a much higher price per minute.

I plugged a laptop into the first broadband connection and it did nothing. I plugged into the second one and the Virtual Private Network (VPN) that allows us to log into the ABC's WAN over broadband (we can also log into it over dial up) came up on the first attempt. The Avid word processing program we use called iNews came up too, much to my surprise. It was the first time in a few months that a couple of things had gone right at the first attempt. "That's a bit of a worry," said Jane, the Promotions Manager, who had tagged along to see how we work in the field.

In between collecting sound FX in the local supermarket and out on the street, I had AM presenter Tony Eastley do a mic check and make sure that he was happy with the physical setup. Optimistic and believing it was all falling into place nicely, I banged off an e-message for the morning crew telling them it was all smooth sailing for the next day.

AM's Executive Producer David Burgess, Tony and journalist Lindy Kerin went off to do more interviews. I mixed and edited Tony's package: a piece containing an interview, Tony's voice links and FX. We use Cool Edit Pro to do this work. It's not a program that gets much of a profile in AT I've noticed. Version 2 seems to have an indifferent reputation but we find it very effective.

We finished work on all the packages and interviews at 2230. I then made a wrong decision by declaring it would be easy to file the pieces

back to Sydney in the morning, rather than doing it that night.

WAKE IN FRIGHT

By 0500 we were back at the OB studio and discovered the good times of the previous afternoon had gone and the broadband didn't want to come up easily, or stay up. Half way through filing the first piece on the FTP, it crashed. And so started the broadband yo-yo. The dialup on my laptop didn't want to work either. It kept giving me an error message that I knew from experience would only be solved by a trip to the IT department. The modem on my second laptop had died a couple of days beforehand in Darwin. I was regretting going to bed early and getting up late [Late? You call 5am late? – Ed]. Crouched over his laptop on our makeshift production table, Tony called out, "I'm back in again." His cheerfulness didn't last long though: "It's crashed again."

In between trying to get the laptops connected, I rebuilt the studio and the satellite link came up first time and stayed up.

We weren't getting far trying to file the audio via FTP so I decided to send the audio in real time up the satellite. A search of the equipment cases showed that I'd put in every combination of lead except a mini RTS to XL, and so couldn't get the audio from the laptop into the Glensound. I did have a mini RTS to RCA, which I thought I could use with the Tieline POTS link. But Murphy was working overtime on his Law that morning and the Tieline wasn't configured to work that way.

I grabbed the manual to see if I could get around that problem. Behind me, I heard an anxious voice: "Oh no, it's worse than I thought, he's reading the manual!" A quick read told me it wasn't the best option. I got Tony away from the yo-yo and had him fish around in his recorder kit to see what leads he had. He mercifully had the one I wanted. Slap on a sex changer and we were upchucking material back to Sydney but running out of time to get to air with the Radio National (RN) version of the program due to start at 0710 EST.

THE IMMOVABLE OBJECT

Broadcasting deadlines are immovable objects that just keep getting closer. For current affairs it's even worse, as we can't play ads, filler music or even ad lib. We're either on air with the lot or we're not. The great immovable object for AM is the 0800 on-air timeslot.

I finished feeding material into Sydney 10 minutes before the Radio National (RN) airtime but the scripts were still not organised. David pulled the plug on the RN show. It was a sensible call. It would have been ropey. That gave us time to get the main 0800 show into shape. We couldn't miss that one or we'd have blown the reason for going all the way to Maningrida. The great immovable object was now moving towards us at Warp 6!

Tony continued the broadband juggle and one by one connected a printout of the scripts he needed from the air queue in Sydney. By three minutes to airtime he had all but the last two and I finally



1: The setup at Maningrida showing the Tieline (left) and the Glensound mixer/codecs. 2: More horns than a line array; The Willare Bridge beer garden studio. 3: Tony Eastley mans the presenter chair. 4: What happens if I hit this button?; Technical Producer Alan Arthur troubleshoots the system.

"The great immovable object was now moving towards us at Warp 6!"



Producer David Burgess (left) and Alan Arthur in the 'open air' studio at the Willare Bridge Roadhouse.

“Behind me, I heard an anxious voice: ‘Oh no, it’s worse than I thought, he’s reading the manual!’”

got him to sit down at the mic for a level and monitor check with Sydney.

0800 EST arrived and the quaint theme from the first *AM* show of 40 years ago floated out over the airwaves and we were on air. Apart from a minor script glitch, the show then went smoothly. We’d achieved our brief of taking *AM* out of the confines of the studio and broadcasting from a remote location where the story was happening. We got a lot more grey hairs in the process too! But it wasn’t over yet.

TAKE TWO

The next road trip was to The Kimberley in Western Australia, broadcasting first from the front porch of the ABC in Broome, and then from the beer garden at the Willare Bridge Roadhouse on the Fitzroy River.

As there was no broadband at the Roadhouse, and only two phone lines, I decided to take a Thrane and Thrane Explorer 700 BGAN satphone (recently purchased by the ABC) which, as well as doing ISDN, also does simultaneous internet connections – and more – if you want it to.

The only problem with this idea was that the BGAN satellite for the Pacific is not due to be launched until 2008, so we couldn’t test the unit in Sydney! I sent it over to my colleague Martin Roth at Perth ABC, who spent an initially very frustrating and then successful time getting the unit talking with the Tieline Commander mixer/codec. When I arrived in Perth, he gave me a crash course on using the Explorer before I left for Broome with a working laptop and satphone.

SWEEPING THE PORCH

The Broome ABC is a small office. We’d decided to broadcast from their front porch as the local breakfast team would be on air from their studio at the same time. They’d also be using their only ISDN connection, so we’d use our satphone link. There weren’t any suitable phone lines at the ABC for the POTS back-up connection either, so the business next door kindly allowed us to plug into their fax line.

The company next door also had a good awning with an unobstructed view West-Northwest for upchucking to the Indian Ocean Inmarsat satellite. But Murphy was still tagging along with us. First time I turned on the Explorer it came

up with an error message: ‘1 alarm pending’. I rebooted and sent Murphy across the road to the Roebuck Bay Hotel – it came up correctly and I soon had the line up and ready for use.

I used the Tieline Commander G3 field mixer for the Kimberley broadcasts. Both the POTS and ISDN dialled through first time to Studio 212 in Sydney.

Presenter Tony Eastley, Executive Producer David Burgess and journalist Tanya Nolan had arrived in Broome ahead of me and had been collecting FX and interviews. Not to be caught short of time like we were in Maningrida, we set to work writing scripts, recording links, editing interviews and mixing packages.

By 2230, all the WAV files had been converted into MP3s and sent via FTP to the server in Sydney and all the scripts were in the *AM* iNews air queue. It was all in the can (as it were).

WAKY WAKY RISE & LINE TEST

A few hours sleep and we were back at the office at 0300 local time. In a younger life on the road with bands, I was just heading to bed at this time! Now I was in a side alley with a torch, up a ladder, chocking the sat dish on the awning with bricks. Murphy must have been sleeping in as it came up first time and connected through to 212 in Sydney.

It was gloomy on the porch, so out came some portable floodlights. At 0510 (Broome time), we were on air into the Radio National 0710 EST slot. The RN show was problem-free. The garbo truck came and went between shows and the great immovable object of the 0800 on-air time (and the good light of sunrise in Broome) appeared. The main *AM* show went without a hitch as well.

UP STUMPS AGAIN

We packed up, had breakfast and headed out on the Savannah Way to the Willare Bridge Roadhouse by the Fitzroy River. Cattle were wandering along the roadside and the red pindan dirt was with us.

We finally came across water in the Cockatoo Creek, Ski Lake and then crossed the Willare Bridge over the Fitzroy River. We wandered into the Willare Bridge Roadhouse and found ourselves in a little piece of Aussie paradise, run by Tex and Annalisa – two of the friendliest,



ABC STUDIO 212

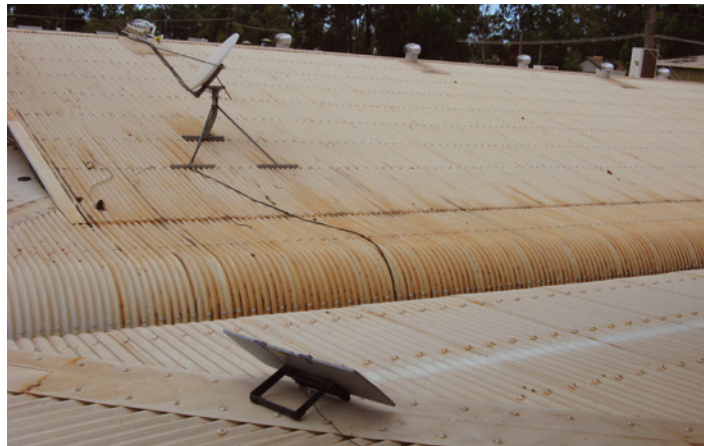
The Current Affairs control room studio is in the ABC’s Ultimo complex in Sydney. It’s called ‘The Johnnie Bwin Studio 212’. Johnnie was a legendary sound engineer who spent 27 years with *AM* and was a mentor to many young sound engineers with his Zen-like approach to problems and technical suffering. We named the studio after him on his retirement. 212 has a Klotz Vadis DC 2 desk, configured for Radio Cuff’s particular requirements. The first year we had it, there was a fair bit of angst with it sticking and crashing but it’s settled in now and reboots are rare. The routing is good and the formatting

very useful, though it can take a while to set up. I found the parametric EQ involves too many menu movements to access quickly when on-air, so I’ve had two channels of analogue graphics installed across the phone channels to enable rapid EQ’ing of phone calls. I’ve also installed a VU meter across a spare headphone output.

Klotz has inserted the compressor/limiter pre-fader with no option to insert them post fader. There are often highly variable levels in the pieces we put to air and there is no time for the panel op to preview them. So we usually ride the faders the whole time anticipating changes in levels. I would prefer to ride the levels into the compressor than out of it.

On these types of OBs, 212 inserts live fibre and phone lines and plays in pre-recorded items from Dcart, a digital editor developed by the ABC in the ‘90s, that is now being superseded by Netia. Only the presenter and on-site guests come in from the OB site. Interviews and packages put together in the field as wav files are converted to MP3s and filed via FTP to a server in Ultimo. The presenter for *AM* and sibling programs *The World Today* and *PM* is normally in studio 211, for which 212 is the control room. Shure SM7 mics are used in 211. There are two mono Studer B67 tape machines in 212 but they are really just expensive shelves with VU meters.





Our Satellite dish & theirs: The Nera World Communicator GAN (Global Area Network) is lightweight and portable with a foldable antenna.

most helpful people you could meet. The accommodation upstairs was pub-style rooms either side of a wide corridor where Mango the dog was stretched out asleep.

POTS IN THE BEER GARDEN

David and Tony headed off to Derby to gather interviews and sounds while I sorted out a broadcast spot on a table in the beer garden. The POTS [of beer? – Ed.] sounded remarkably good. The sat dish was set up on a table at the end of the balcony with a clear view to West-Northwest. The ISDN tested okay, as did the laptop.

When David and Tony returned, we started scripting, editing and mixing on the balcony outside our rooms. I turned the sat link on again to access iNews and the FTP, and found that Murphy had checked into the Roadhouse too. Now I had two alarms pending. After a number of attempts, the link came up and we accessed Sydney.

After dinner, Tony and David gathered a collection of locals around a table and recorded a discussion on the Kimberley while I had a read of the manual to find out about alarms. But there was too much study involved, and as the link was currently up (and I was too tired to study), I let it go for the night. We chopped a 15-minute discussion back to less than four and fed the last script and MP3 back to Sydney, heading to bed at 2300 just as the country music really cranked up below in the beer garden.

My alarm went off at 0300. Tex was already up, had the radio blaring downstairs, the urn boiling and the gas heaters placed on each side of the broadcast table under a couple of spotlights. I retrieved my gear from the storeroom and set up again. The sat link came up and the laptop connected through to Sydney. The POTS still sounded really good. However, when I tested the ISDN, half an hour from the Radio National *AM* on-air timeslot, I found Murphy had got up early too – I just couldn't shake him! The Tieline checked out okay so it was likely those alarms that were causing the problems, but I didn't have time to trouble-shoot it, and noting David's rising anxiety as the ISDN dialling kept failing, I decided to go with the POTS link.

CRICKET MICS

It was quiet. Tex said the vehicles and birds would start up at dawn. I could hear a cricket

somewhere and dragged the FX mic around the beer garden till I located the insect talent and left the RE50 in its general vicinity, also pointing out towards the road. Pre dawn, under the spotlights, Tony presented the Radio National *AM* program without a hitch. The return line on the POTS was sounding great, the best I'd heard it.

By 6am (local time), the sun was peeping over the garden wall, the air was still, the birds were awake and the great immovable object of 0800 appeared. There was an audience gathering on the tables nearby with their cooked breakfasts in front of them.

The show was going very well. Half way through, however, Tony motioned to his laptop, connected via the sat link to Sydney. It was showing a low battery message and a demand to be put on mains power. But it was *on* mains power. Then the laptop blinked off. I plugged in another lead and the laptop came back to life but had to be logged back into Sydney.

There is usually a bit of an adrenaline rush doing an *AM* program. In the field it is even more intense and I felt quite high by the end of the show. A cup of tea followed by Annalisa's 'big breakfast' went down a treat!

CELEBRATING A JOB WELL DONE

Due to the two-hour delay between the east and west coasts, we sat back and listened to ourselves on the roadhouse radio. A crowd gathered around listening to what they had just watched. I was pleased at how good the POTS link sounded; it was not much adrift of the ISDN link of the day before.

Then we were on the road again to catch a plane back to Perth to do one more set of shows from an ABC studio in East Perth – a bit of a cakewalk after making studios on the road! ■

My thanks to Greg Charman at Tieline and Martin Roth at ABC Perth for their assistance with the gear.



MP3s of AM's Maningrida program can be heard at:
www.abc.net.au/am/indexes/2007/am_20070724.htm

MP3s for Broome can be heard at
www.abc.net.au/am/indexes/2007/am_20070822.htm

MP3s for Willare Bridge Roadhouse can be heard at:
www.abc.net.au/am/indexes/2007/am_20070823.htm