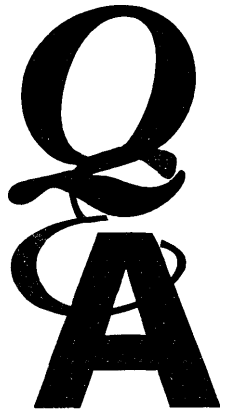


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We talk to **Christine Goode**, spectrum manager, Spectrum Management Agency, about the role and functions of the agency.

# Managing the spectrum



## **What is the Spectrum Management Agency?**

The SMA is really a sister regulator to the ABA and to Austel. It plans the use of the radio frequency spectrum in Australia, it sets technical standards for the operation of radiocommunications equipment, then it licences users' access to the spectrum. The SMA's work has an international dimension, so it participates in the International Telecommunications Union where fundamental agreements are reached on world-wide use of various parts of the spectrum for certain purposes. For example, aircraft communication, ground-to-air, where obviously a common system world-wide is necessary. Other examples are maritime distress frequencies and the parts of the spectrum that are used for satellite feeder links.

## **Are these frequencies decided on an international basis, rather than a national basis?**

Yes. Individual national administrations then give effect to those within their own domestic arena, and they can vary from them too. But the SMA carries through a lot of the international allocations when it is judged to be important to be on a common footing with the rest of the world. There is also an economic spin-off from that. Manufacturers are then able to make equipment that is useable on the same set of frequencies world-wide. This leads to economies of scale in the production costs for equipment that users in different countries purchase.

At the domestic level, just to give you an idea of the scale of what we're dealing with, there are about 250 000 licences on issue from us to various users at present. The SMA is headquartered in Canberra, and we have 14 area offices around the country. Those offices handle most of the licensing, interact with our clients and importantly, do a lot of work on the ground to investigate any complaints of interference, and resolve those interference problems.

There are about 400 staff. I think the difference in scale [the ABA has about 150 staff] is in part accounted for by the fact that there are so many hundreds of thousands of radiocommunications users.

Because I'm talking to an audience which is more familiar with the ABA, it is useful just to draw out the common features and the differences in the regulation. We're both in the business of licensing access to certain frequencies; the ABA does that for the broadcasting groups of frequencies. We're both in the business of setting technical conditions, so that there can be multiple users of the spectrum without interfering with each other. But there are also distinct differences. ▶





The ABA's planning for the broadcasting spectrum is much more detailed than the planning we do for non-broadcasting users. The users essentially do a lot of that themselves, within parameters set by us. Also the SMA is not at all involved in ownership or content regulation.

***Are they the main differences between the two organisations?***

Yes. The ABA is dealing with a certain sector, a defined sector of use of the radiofrequency spectrum, we deal with the rest. The Radiocommunications Act is quite silent on ownership and on content, so we don't regulate in those areas.

***How long has the SMA been operating?***

The SMA has been going for two years. The ABA got started about nine months before us. The interface before we started was between the ABA and the then Radiocommunications Division of the former Department of Transport and Communications.

***Does the SMA work only to the Radiocommunications Act, in a similar way to the way the ABA works to the Broadcasting Services Act?***

We also have a Taxes Collection Act that we administer and there are some taxation powers that flow from Radiocommunications Transmitter & Receiver Taxing Acts. The SMA determines licence fees under these Acts.

***What type of relationship does the SMA have with the ABA?***

I think the relationship that the two organisations have, particularly under me as the head of the SMA and Peter [Webb] as the head of the ABA, is one of partnership. We are

partners in managing use of the spectrum.

As I said before, certain segments of the spectrum are assigned to the ABA to plan and manage, but the use of those bands and the use of the rest of the spectrum, we manage. This only works well if you have a good spectrum management regime.

In both cases, what the ABA does and what we do starts with planning, flows into licensing and the technical conditions we set, and goes on through to on the ground problems of resolving any cases of interference. We co-operate and share in a lot of that work.

For example, we share a computerised database on spectrum use and we're both involved in redeveloping that database and licensing system that we both implement. Your readers are probably familiar with this as the RADCOM system.

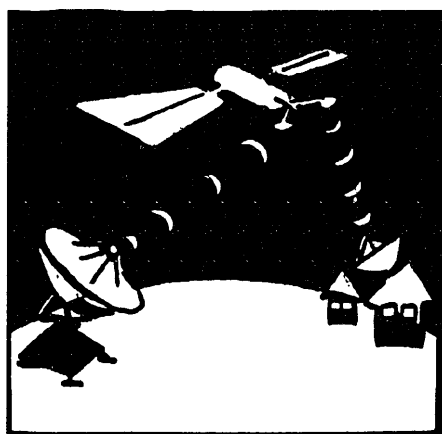
At the operational level, the SMA, through its network of offices, can quite often be involved in diagnosing interference that might stem from broadcasting transmission, or an interference problem that is being caused to a broadcaster. We do the diagnosis. We then consult the ABA as to what's needed to resolve the problem, and then often on the ABA's behalf, we will enforce a particular licence condition or technical condition that the ABA might have set. We can only operate completely effectively from the point-of-view of the public and the user if we are operating in close partnership.

I think we're doing that fairly well, although we're both conscious of areas in which we can improve the co-ordination and the degree to which the operation is streamlined.

***Your appointment as an associate member was announced in May. What skills do you bring to the ABA as its first associate member?***

I think there are probably three significant areas of skill or expertise that are important here.

The first one, in my view, is long experience in and an understanding of the interaction between government regulation and industry. My experience ranges across several sectors: the transport sector, land transport and aviation, tourism and broadcasting, telecommunications and radiocommunications. I think it is quite vital for people who have regulatory powers to be alert to the sort of impact their regulation can have on an industry, and very alert to any





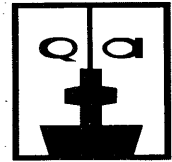
unintended effects of regulation. Where regulation has an unintended effect, it is important that the regulator recommends to the government that the regulation be modified. I think I bring that understanding about the dynamics of regulation and the way in which it can impact on an industry. The regulator has usually been given powers that it can exercise at arms' length from a minister but you do, nonetheless, need to keep that

force. I also had some input on the ABA's report [to the Minister] on the operation of the Act.

***What is your vision for the future and the impact the new technologies looming over the horizon?***

I'll like to touch on a number of significant developments that we're seeing which I think are significant for both the SMA and the ABA.

**‘The ABA and the SMA can only operate completely effectively, from the point-of-view of the public and the user, if we are operating in close partnership ... I think we're doing that fairly well’**



minister and the government informed about what you're doing, and ensure that the way you're implementing the legislation is in tune with what the government is thinking or had expected. I have a fairly long history of staying pretty closely in touch with ministers and governments on just those points.

Secondly, of course I have direct experience of the Broadcasting Services Act through being closely involved in developing it, and consulting with industry about it. I also have quite a lot of knowledge of the broadcasting industry.

And third, because I'm a chief executive of a partner regulator, I think I also bring the ability to ensure we have co-operative and well dove-tailed working arrangements between the two organisations.

***As an associate member, do you work on specific projects?***

The legislation was changed before I was appointed, so that an associate doesn't have to be confined to specific tasks. As the Minister [for Communications and the Arts] explained it to me, he doesn't intend that I confine myself.

It's an associate member appointment that can range over the full gamut of the issues that the ABA deals with. It's a matter for Peter Webb and myself to work out some sensible working arrangements.

***What areas you been working on to date?***

I've been involved in the planning and allocation process and participated in a couple of meetings of the planning and allocation task

Developments in mobile communications are very significant and continuing. The individual will be able to communicate with anyone anywhere in the world at any time, from their own portable handset. We're not quite there yet, but that sort of communication is not too far off. It will require much more extensive use of satellite communication which has impact for broadcasting and for all sorts of other communication needs, like data transfer. The SMA and the ABA are both seeing continuing technological change which is allowing use of higher and higher frequency bands, and we need to respond to that.

***What are the implications of using the higher frequencies?***

It means that radio-based communication can be used in an increasing number of ways. It offers possibilities of different frequencies in combination with other forms of communications, like wire-based communication. So we're getting equipment developed for commercial production which is cheaper and offers new options for using frequencies when perhaps the use of current frequencies is very congested.

***So the use of the radiofrequency spectrum is continually expanding?***

Continually evolving and expanding, yes. We are also (and this is another very good thing for those of us who use radiocommunications) seeing more sophisticated methods for containing interference. That's another technological development.



## Q &amp; A

**Is it important to us?**

I think so. For example, 'spread spectrum' techniques mean that the equipment you can transmit with picks out vacant frequencies across quite a wide frequency range. Because it does that, it doesn't interfere with existing

I think an important issue for broadcasters is whether or not the Government will decide that current broadcasters should have some sort of guaranteed access to the 'L' band spectrum for digital sound broadcasting purposes. But they're government level



**'What I would like to see in the future is for broadcasters to open their eyes a bit more to the scope for them to move into different forms of communication'**

radio uses. That's an excellent development for radio users.

I think also we're all watching the early days of some blurring of the distinction between telecommunications and broadcasting. We're already seeing telecommunications providers starting to move into some forms of broadcasting.

What I would like to see in the future is for broadcasters to open their eyes a bit more to the scope for them to move into different forms of communication as well.

**What effect do you think digital sound broadcasting will have?**

Well, both organisations at this stage are doing some work on digital sound broadcasting.

The ABA is doing some planning work for broadcasting use of what we call the 'L' band, frequencies are up around the 1.5 gigahertz area. The SMA also will be doing some planning work on the use of those frequencies for non-broadcast use, and we're both likely to participate in international work on technical criteria for broadcasting and non-broadcasting to share those frequencies. All of that work will give the government a good basis to make policy decisions. It doesn't need to make them yet, but downstream, it will need to decide whether the 'L' band spectrum should be designated as broadcasting services spectrum, or whether it shouldn't be and you have a mix of uses.

decisions, and I think the view that the ABA and the SMA are taking at the moment, and indeed the Department [of Communications and the Arts], is that some of the planning work needs to proceed further. We'll then be rather better informed for the sort of decisions the Government will have to make.

It's a good example of co-operative planning work.

**Considering how closely the ABA and the SMA work, do you want to make any comment about the idea of a single regulator?**

I think that we can continue on working well as separate agencies. If the Government decided to change the boundary lines, we would make that work too.

But my own view is that it is working quite effectively the way it is structured now. My view also is that the main impact of any change to organisations coming from the telecommunications policy review, which the Government will be dealing with relatively soon, is likely to be to Austel. ☐

