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Education matters

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Sharpening the saw

It is time once again to welcome students and past students (i.e. everyone under the age of 90!) to the ASEG Conference and Exhibition. Our conferences are a crucial part of professional development opportunities for all our Members.

The American management guru Stephen R Covey, best known for his book 'The 7 Habits of Highly Successful People', capped his list of habits with the line 'sharpen the saw'. He described this as the habit of self-renewal; preserving and enhancing your greatest asset – yourself.

Conferences are one of our best opportunities to gain awareness and new skills via papers from outside our normal area of work and workshops led by experts from outside our normal pool of contacts. Take the opportunity to talk with any geophysicist 10 years older than you are and ask 'what were you doing 10 years ago?' Chances are their role was substantially, or totally, different from their role today.

As the Committee for Economic Development of Australia (CEDA) reported a year ago, we can expect that 40% of Australian jobs will be replaced by technology in the next decade (and that includes the ancient fall-back option of taxi-driving, with the rise of autonomous driverless vehicles). But, nevertheless, the 2015 CEDA Report was upbeat, pointing out that in the five years to 2014 Australia created six times the number of new jobs, compared with jobs lost by technology. Two equivalents which come to mind in our own profession are the decreased use of specialist seismic processors or geophysical modellers, complemented by increased demand for geological interpreters who are still required to have a deep understanding of the limitations and ambiguities of the underlying geophysical data.

The 15 workshops at this conference, the guest and plenary speakers, and the networking opportunities within sessions of our direct interests provide unparalleled opportunity for us to widen our horizons or, in Covey's language, sharpen the saw of our skill base.

I am reminded of a conference dinner in 2003 where I got into conversation with an academic colleague from a US university who told me he was getting involved in some work developing electromagnetic methods to find unexploded ordnance for the US Army. He explained that the army wanted not only to locate the items, but describe their size, shape and characteristics. I responded that we had been practising such concepts for 20 years in mineral exploration. The eventual outcome was a three year collaboration with Andrew Duncan and the WA company Electromagnetic Imaging Technology, developing Australian mineral exploration hardware and software technology at a 1:100 to 1:1000 scale for US Army applications. We can't claim to have left much of a mark on operational methods of the US Army, but every geophysicist who uses EMIT's 'Maxwell' EM modelling software will see the option of approximating the EM response of a conducting prism – an algorithm enhanced during those days a decade ago spent modelling the response of nasty cylindrical objects.

May each of us arrive at this conference ready to identify the trees, not the undifferentiated forest. And to sharpen the saw!