

Bridge over troubled water

This is my last President's piece.

When I started my presidency in April last year, I thought the year 2013–14 will be an easy year for an ASEG president. My predecessors worked hard and many projects were started with most of them well in order. Our journal *Exploration Geophysics* had passed the first year as a joint publication with SEGJ and KSEG, and with an improving impact factor rating. The publication of *Geological Interpretation of Aeromagnetic Data* (Isles and Rankin, 2013) was almost ready to hit the market. The new website had been launched in August 2012 and its development was in its final stage. Preparation for the 23rd Conference in Melbourne was well advanced. The first OzSTEP courses were ready to go ahead. All of these had gone through several years of preparation, negotiation and planning. They were all going well.

In the middle of the year, we noticed a link between the website and the membership database failed to function properly. Then it became apparent the mailing of our publications did not proceed as each member requested. These needed to be fixed between the secretariat, the web service provider and the publisher, with a superhuman effort of committee chairs coordinating it all, finding and implementing a stable solution. This caused the delay in the membership renewal this year. By the time this issue of *Preview* reaches your desk, the problems will have been solved, restoring online access to profiles and publications for our members. The meeting notices will be posted on the web page as well as sent as e-mail alert by each branch.

These troubles led to a change of secretariat. We terminated the secretariat contract with Centre of Association Management (CASM) in Perth at the end of February after 11 years of service. I hope this ensures an improvement of membership service, particularly related to application of computers. The new secretariat has been selected through a tendering process, which took over 10 weeks. The selection subcommittee members worked during the summer holiday period. The new secretariat is The Association Specialists (TAS; see this issue for introductory article).

Computer technology should make our life easy. This statement, however, needs a qualifier: 'when it is used sensibly'.

How often do you spend time at the checkout of a supermarket because the scanner does not find the barcode; the price does not come up for the barcode; the operator cannot reverse a wrong entry; or, to wait for the supervisor? Geophysical data processing, analysis, interpretation and presentation benefit from this enormously. How often do we see a map by computer gridding that does not make plausible geological sense? We do need some sense to interpret and 'read' the data.

During my studentship in Japan, my professor told us a story of his time: when returning from a field trip to transcribe data from the field notes to data sheets, the first thing to do is to select good data records to analyse first. The subsequent calculations being the hard work: mostly with pen and paper; slide rule and sometimes an abacus. A noisy mechanical calculator with a handle, called an adding machine, proved the best tool available. We found an electronic calculator in the common room for researchers and postgraduate students to share. The size of that machine had been comparable to a small microwave oven and awfully heavy. In fact it sat on a custom-made trolley.

As data processing is such an onerous task, and time is limited, they could only process some of the data acquired. The data they decided to analyse, of course, should be meaningful. They, therefore, needed good insight into the data even before starting processing.

We live in a different world. Data flow and work flow are streamlined. An

enormous amount of data is fed to computers for number crunching every day using latest software through the advanced data transmission technology. A new idea can be tested on a desktop PC, and is implemented into production mode quickly. Yet, geophysical interpreters are needed to monitor what the computer throws at them in terms of geological reality. Perhaps, geological reality is sometimes vague and accidental to be logically modelled. Even with the techniques to allow uncertainty and ambiguity such as fuzzy logic and stochastic modelling, a program to model the entire geological history of even one oil field or mineral region is still a dream. This is still a domain of the human brain: combination of learning, training and imagination. The computer technology made the manual and routine work a lot easier. But learned geophysicists are still needed to bridge the data and reality.

In the first *President's Piece*, I introduced myself as a 'bridge' between disciplines in geophysics, between ASEG and associated societies in other countries, and between industry and academia. Now I look back to my predecessors from 1970 to 2012 and look forward to my successor in 2014, and I recognise I am a bridge to connect the past and future of the ASEG. Crossing a bridge, the scenery may change, but we are still on the same earth where geophysicists stand upon. I wish all the best to my successors.

Koya Suto
Outgoing ASEG President

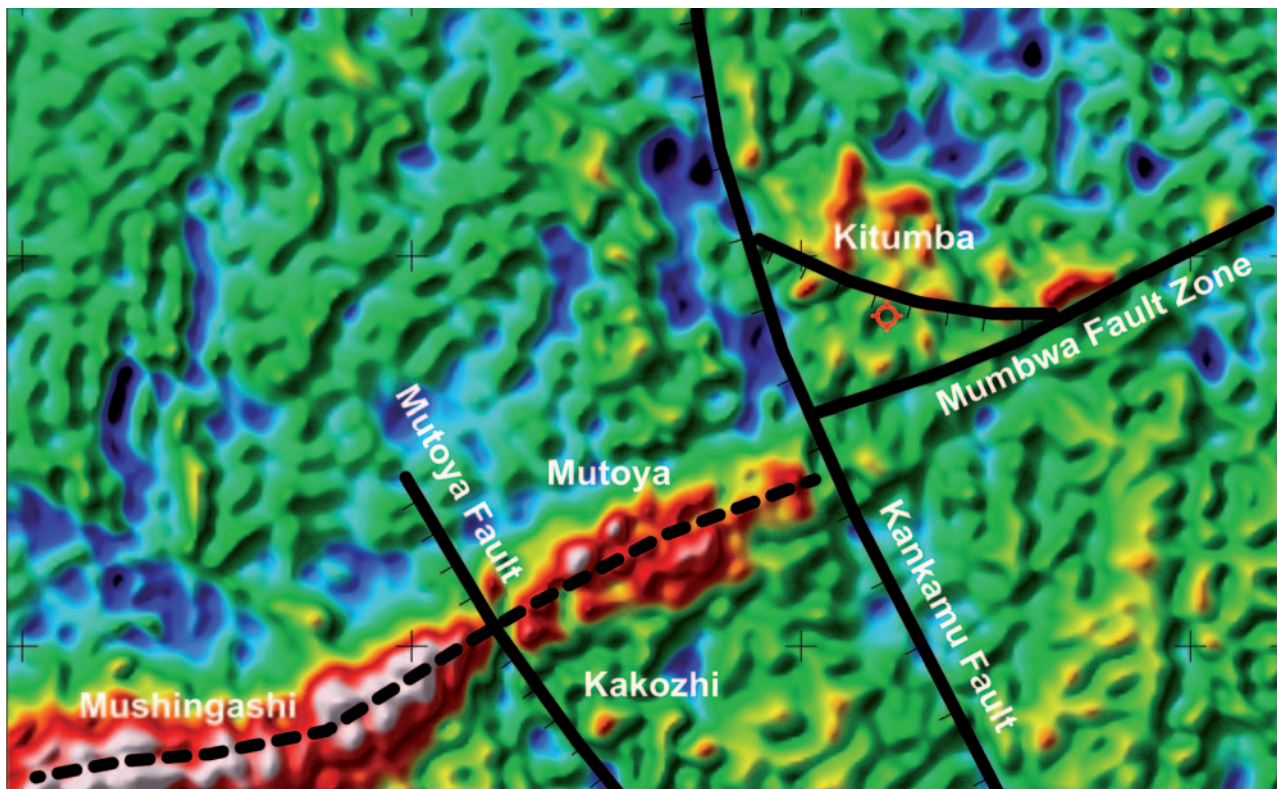


Koya charting across a bridge: Bath, England.



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New members

The ASEG extends a warm welcome to the nine new individual members approved by the Federal Executive on 27 February 2014 (see table).

Name	Organisation	Country	Membership grade
James Ross Austin	CSIRO	Australia	Active
Nicholas Badilovich	–	Australia	Student
Mitchell John Clement	–	Australia	Student
Marcel Bernard Croon	–	Australia	Active
Madeleine Louise Hearnden	–	Australia	Student
Martinez Monoz	–	Australia	Associate
Ken Tokeshi	UWS	Australia	Active
Benjamin Ross Witten	–	Australia	Student
Benjamin John Wruck	Santos	Australia	Associate

ASEG's new secretariat: The Association Specialists



The Federal Executive of the Australian Society of Exploration Geophysicists (ASEG) is pleased to announce that The Association Specialists (TAS) has been appointed as the new secretariat contractor for the ASEG as of Thursday 20 February 2014.

The Association Specialists is one of the most experienced and technologically advanced Association Management Companies (AMC) and Professional Conference Organisers (PCO) in Australia. TAS has existing relationships with over 30 Australian and New Zealand based professional bodies, trade associations, government departments, societies and not-for-profit agencies providing solutions for secretariat, event management and financial services.

The Association Specialists has collaborated with ASEG on a number of prior occasions under its previous brand, Conference Action. TAS was responsible for the successful delivery of at least three ASEG-PESA Conferences and Exhibitions, most recently in Sydney in 2004 and 2010.

The Association Specialists brings to the Society a number of benefits:

- Access to specialised skills: financial, managerial, marketing and sales, customer service, secretarial, IT support and meetings management.
- Improved efficiencies through economies of scale and extensive investments in technology, communication systems, methodologies, people and security.
- Knowledgeable, tertiary trained, full-time staff providing a complete set of secretariat and management skills.

- Access to a network of proven and trusted specialist suppliers.
- Shared knowledge and trends developed across similar organisations under TAS's care.

TAS is confident in its ability to bring to ASEG the highest level of skill and experience available, to carry out the day to day functions of the Society allowing the Federal Executive to focus on strategy and delivery of value to the membership base. Below are the TAS team members who will be working closely with the ASEG Federal Council and performing the day-to-day administration of the Society:

TAS team members

Francis Child

Managing Director

Francis Child was born and educated in the United Kingdom where he obtained a BSc in Economics with Statistics at the University of Bristol. He qualified as a member of The Institute of Chartered Accountants in England and Wales in 1981. Since leaving the accounting profession Francis gained extensive experience in both the entertainment and events based industry sectors. After working with Chrysalis Records and EMI Records in the UK for 8 years, Francis moved to Australia in 1992, where for 8 years he worked for AIC Worldwide, one of the leading global conference and exhibition organisers. Francis acquired The Association Specialists (then known as Conference Action) in July 2000 introducing a strong culture of integrity and transparency to the business.

Doug Wiles

Team Manager – Association Management

Doug graduated from Macquarie University with a Bachelor of Social

Science majoring in Social Policy and Politics. Through his experience volunteering overseas and experience with TAS over the past 4 years, Doug has gained a working knowledge of associations and not-for-profit organisations. He is passionate about aiding his clients in the pursuit of their strategic goals and as a team manager drives the same level of excellence, enthusiasm and commitment from his staff.

Ben Williams

Client Services Manager

Ben has always been interested in hospitality and tourism because of the variety of work environments. This interest took him to Southern Cross University where he obtained a Bachelor of Business majoring in hotel management. Ben started his career with Business Events Sydney (BESydney) as a work experience student in 2005. Over the course of his career with BESydney he was promoted three times, holding the position of National Business Development Manager before joining The Association Specialists team in 2013. Ben brings a wealth of knowledge from his experience in the NFP and business event sectors assisting a highly varied portfolio of clients in his Client Services Manager role.

Ben Williams, as ASEG's Client Services Manager will be the first point of call for all enquiries. He can be reached on the contact details below.

Mail:

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Email: secretary@aseg.org.au

ASEG to establish Specialist Groups

The Federal Executive of the ASEG has cleared the way for the society to establish Specialist Groups through the adoption of a By Law that sets out how Specialist groups can be established and operated.

Specialist Groups provide a way for members who have a particular geophysical interest to network with other members with the same interest. But they are more than a networking opportunity. They will conduct regular scientific workshops, plan and hold sessions at future conferences, produce newsletters, report regularly to the society membership at large through articles in *Preview*, and encourage the publication of papers from their workshops in *Exploration Geophysics*. They will be a catalyst for advancing the breadth and depth of the science researched and applied by their members.

Specialist groups will therefore provide another dimension to how the society is organised. To date, the society's structure has been built around Branches – that is, the structure is very much geographically based. Specialist Groups are based around the work that members do. The society's members can therefore now be associated with a branch and also join one or more Specialist Groups.

However, whereas members (in Australia) automatically become associated with a Branch when they join the society, and move Branches when they move to another state or territory, membership of a Specialist Group is voluntary, and would have to be applied for to the relevant Specialist Group.

Specialist Groups will be part of the formal structure of the society. Each Specialist Group would have an Executive (at least a Chair, Secretary and Treasurer) and its own budget and programme of activities. Each is expected through time to become self-funding, either through sponsorship or through a nominal annual fee for its members. The Chairs of Specialist Groups will automatically become members of the ASEG Council, which is the peak advisory body to the Federal Executive.

The By Law that establishes Specialist Groups requires that Specialist Groups have at least 10 founding members – this is a nominal number chosen to ensure at

least a small critical mass of members to get the Specialist Groups off to a start.

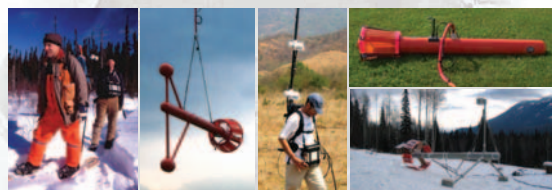
Anyone interested in setting up a Specialist group in any aspect of geophysics should contact Tania Dhu (Tania.Dhu@nt.gov.au) who is the Federal Executive member who will provide coordination between Specialist Groups and the Federal Executive.

Specialist Groups have been foreshadowed in the society's Constitution for some time but to date none have been

set up. The society's Constitution does not provide details of how they should be managed, or any expectations of what they would or should do for their members. The new By Law does so. Because the Constitution allows for Members to comment on and change or disallow By Laws, the By Law that establishes Specialist Groups is published in this edition of *Preview*. Anyone wishing to comment on the By Law should contact the Society's Secretary, Barry Drummond (Fedsec@aseg.org.au).

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By Laws Australian Society of Exploration Geophysicists

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Definitions

ASEG: The Australian Society of Exploration Geophysics, “the Society”.

Council: A meeting of the Federal and State Executives of the ASEG, usually held every 18 months at ASEG conferences.

Federal Executive: The paramount management body of the Society comprised of 12 ASEG members, four of whom are elected into the positions President, President Elect, Secretary and Treasurer and are Directors of the Society.

Financial member: Any ASEG Active, Associate, Corporate, Corporate Plus, Retired, Honorary, or Student member whose names are from time to time contained within the official list of members and who have paid their membership fees for the current year.

State Executive: The President, Treasurer and Secretary of each state or territory branch of the Society.

By Laws

A By Law to establish, manage, and terminate Specialist Groups

This By Law is established under the terms and conditions of Clause 12 [Specialist Groups] and Clause 15 [By Laws] of the Constitution of the Australian Society of Exploration Geophysicists.

1. FORMING SPECIALIST GROUPS:

- i. Specialist Groups may be formed following a request to the Federal

Executive by at least ten (10) financial members of the society.

- ii. The Federal Executive may also choose to establish a Specialist Group and will approach suitable members of the Society and ask them to form the Specialist Group.
- iii. Each Specialist group must develop and keep current a charter stating its purpose and use the charter when promoting its activities to members of the Society.

2. EXECUTIVES OF SPECIALIST GROUPS:

- i. Each Specialist Group will have a Chairperson appointed under the terms of Clause 12 of the Constitution.
- ii. Each Specialist Group will appoint a Secretary and Treasurer who together with the Chairperson will constitute the Executive of the Specialist Group.
- iii. The Executive of each Specialist Group will be responsible for the operation of the Specialist Group subject to the terms of this By Law and the Constitution of the ASEG.
- iv. The Executive of a Specialist Group may co-opt as many additional members to the Executive as it deems necessary for the successful operation of the Specialist Group.
- v. The Chairperson of a Specialist Group or his or her nominee may attend meetings of the Council of the Society.

3. JOINING A SPECIALIST GROUP:

- i. Financial members of the Society may apply to the Executives of the Specialist Groups to join the Specialist Groups.

4. FINANCIAL MANAGEMENT:

- i. Treasurers of Specialist Groups will develop and maintain budgets for the Specialist Groups that are operated through the central virtual account system of the Society.
- ii. The general principle will be that Specialist Groups will become financially self sustaining.
- iii. However, if the Federal Executive observes that a Specialist Group is accumulating funds to a level beyond its immediate or longer

term needs and cannot demonstrate to the satisfaction of the Federal Executive that it has plans to spend the money for the benefit of its members, the Federal Executive may at its discretion redistribute any excess funds for the benefit of all members of the Society.

- iv. The Executives of a Specialist Group may at their discretion impose an annual fee for membership of the Specialist Group to support the day to day operation of the Specialist Group but
 - a) the general principle should be that this fee be kept sufficiently low that it is not a barrier to membership of the Specialist Group, and
 - b) the annual fee should not be used to cross subsidise activities such as workshops and conference sessions which cannot be attended by all members of the Specialist Group.
- v. Notwithstanding the principles outlined in the paragraph (ii) of this Clause 4, the Federal Executive may at its discretion provide seed funding for the establishment of a Specialist Group.

5. ACTIVITIES OF SPECIALIST GROUPS:

- i. Specialist Groups may conduct any activities that benefit their members that are consistent with the Objects of the Society.
- ii. They might include but not be limited to:
 - a) Holding regular meetings and workshops
 - These meetings and workshops should be open to other members of the Society.
 - They should also be open to geophysicists who are not members of the Society.
 - The principles for charging fees for meetings and conferences and for acknowledging the Society that have been established by the Federal Executive will apply.
 - b) Issuing newsletters to inform members of the Specialist Groups of their activities.
 - c) Organising sessions at ASEG Conferences and Exhibitions.

- d) Cooperating with the Society's Sister Societies where relevant.
- e) As a general principle arranging at least one article for Preview each year; Specialist Groups which hold workshops and conferences should offer their papers for publication in Exploration Geophysics.

6. REPORTING:

- i. Specialist Groups will report annually to the Society and at other times as requested by the Federal Executive [Clause 12.2 of the Constitution].
- ii. Federal Executive will nominate one of its members to act as a point of contact between Specialist Groups and Federal Executive.
- iii. Specialist Groups will report to ASEG Council when it meets.

7. TERMINATION:

- i. Federal Executive may terminate a Specialist Group if in the

opinion of a majority of the Federal Executive the Specialist Group has become inactive or ineffectual.

- ii. In making a decision whether a Specialist Group has become inactive or ineffectual, Federal Executive will take account of:
 - a) Whether the Specialist Group is conducting business consistent with its charter;
 - b) Whether the Specialist Group is conducting the kinds of activities set out in Clause 5, or other relevant activities, that in the opinion of the Federal Executive would be of benefit to the members of the Specialist Group;
 - c) Whether the Specialist Group remains financially viable; and
 - d) Whether the Specialist Group is communicating its activities effectively with the members of the Specialist Group, the Federal

Executive and other members of the Society;

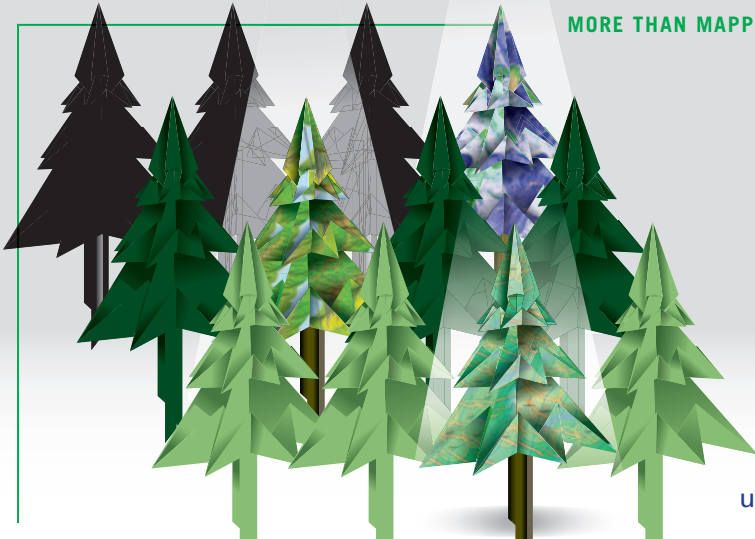
- iii. If a Specialist Group is terminated its financial assets will revert to the central accounts of the Society, and any material assets will be distributed to ASEG members, branches, other Specialist Groups or otherwise disposed of by the Federal Executive as it deems appropriate.

8. HISTORY:

- i. This By Law was adopted by the Federal Executive of the Society on 30 January 2014.
- ii. Subsequent revisions of this By Law will be noted here.

Disclaimer

By Laws are established under the terms and conditions of Clause 15 [By Laws] of the Constitution of the Australian Society of Exploration Geophysicists.



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An appreciation of Kenneth L. Zonge (1936–2013)



Kenneth Zonge.

Several decades ago, if you arrived early enough at Zonge Engineering's Tucson office, you might have noticed an unassuming man with a well-worn broom, diligently sweeping the porch of whatever debris the warm desert winds had deposited the previous evening. You would have received a smile and a chipper welcome, and if this was your first visit, an enthusiastic escort into the building. Passing a poster of misspelled delivery labels (Zeonge, Zonke, Ponge, Donge, etc.), he would usher you into an open-architecture expanse, its soaring truss ceiling anchored by a maze of cluttered cubicles. Emanating from these, you could hear a muffled cacophony of keyboards rattling out reports, the shuffling of geophysical sections, the slurping of fatally strong coffee, a field crew chief fuming about someone taking his truck keys, a woman excitedly shouting in Mandarin into a phone, a man with a Santa beard wielding a soldering iron, and a cluster of geo nerds locked in a fierce debate about the terminal velocity of a grape thrown from the Empire State Building. Who could possibly preside over such an eclectic mélange of "Zongies"? Looking into the eyes of your tour guide and groundskeeper, you had your answer. He was, in fact, Dr. Kenneth L. Zonge, an industry icon in leading-edge electrical geophysics and president of the company.

Ken Zonge grew up in Pennsylvania and Ohio. Joining the Army at 18, he was stationed as an electronics technician in Alaska, a wondrous place that drew him back after his military service to

employment in fishing and trapping. It was on the banks of the Kenai River that he met Kim, soon to be his bride. Three children followed — Gene, Tammy, and Lynn. Ken obtained a B.S. from the University of Alaska (1962), followed by an M.S. from the University of Arizona (1965), both in electrical engineering. The family then returned to Alaska, where Ken took up residence as associate professor at the University of Alaska in Fairbanks, focusing on lightning research and developing portable self-potential instrumentation.

The next move was back to the University of Arizona, where Ken began a Ph.D. program in geophysics under John Sumner, one of the pioneers of the induced polarization (IP) method developed in the 1950s by Newmont Mining and MIT. Unlike DC resistivity, which generally is not diagnostic in distinguishing mineralization from lithology, IP exploits ion-mobility effects arising from mineralization and alteration. Because IP effects were known to vary spectrally and thus depend on the timing of the measurement, Ken became interested in developing a broadband IP method that would more fully characterize mineral responses and perhaps distinguish them from noneconomic sources of polarization (e.g., clays or barren pyrite). Drawing on his electrical engineering background, he dubbed it complex resistivity (CR).

Although time-domain IP methodology was widely utilized in that period, Ken embraced the promise of frequency domain for broadband IP in what he correctly envisioned as an emerging new generation of digital instrumentation, soon to revolutionize data acquisition through bandpass filtering, in situ FFT analysis, stacking, etc. His early tests utilized off-the-shelf minicomputers and auxiliary gear piled on the tailgate of his iconic Chevrolet Suburban, affectionately known as the Red Baron. One early indication of the digital age of electrical geophysics came in his whimsically entitled seminar, "Backpacking a Box Full of Bits into the Bush."

Box of bits in hand, Ken attracted a crew of bright field assistants, including Claude Wiatrowski, Jeff Wynn, Bob Staley, Gary Young, Emmett Van Reed, Carlos Aiken, Dave Rabb, and Bobby Jack, as well as several strategic supporters in industry,

particularly Frank Fritz. Their initial field tests for several mining companies (notably AMAX Inc.) showed indications that CR was indeed capable of mineral discrimination. In 1972, Ken loaded several eager assistants into the Red Baron and drove to Anaheim to present their results at the SEG conference. Packed four to a room and subsisting on cheap hamburgers, they did not seem ready for prime time, but Ken's SEG talk was revolutionary — so much so that the question period brought strong, intensely personal opposition from several icons of analog time domain, who doubted the results.

Unexpectedly, a week later, Ken received a letter from the same critics, offering to buy out his fledgling operation. For a second, he thought about it. Here he was, working out of his bedroom with little but mounting debts to show for it all. That dire predicament had been underscored when, as Ken was repairing some broken equipment, Kim marched in and announced: "I have a name for this company of yours: Zonge Engineering and Research Organization, which spells out as ZERO — which is exactly what we have in the bank account right now!" The name stuck, but fear did not. His response to the critics: File their letter in the trash can, and file a patent on CR (U. S. 3967190).

One problem remained in interpreting CR data. For large arrays, and especially at the low resistivities and higher frequency range characteristic of many mining surveys, the mineral signatures were overwhelmed by electromagnetic coupling between the array wires. At the time, coupling was typically addressed by comparing field data to reference curves, but CR required an automated, inverse solution. As he was completing his Ph.D., Ken had met another graduate student, Jeff Wynn, who was looking for a dissertation topic. Teaming intellect and practicality, they came up with an algorithm to first remove the calculated electromagnetic coupling response of a homogeneous earth, then iteratively remove the responses of as few layers as possible to achieve a minimal-coupling result. The dominant coupling response on the Argand diagrams was effectively eliminated, leaving well-behaved CR residuals. Another round of papers published in *Geophysics* and at conferences unleashed yet another wave of criticism, which was soon followed by the sincerest flattery of

imitation. But word was out. Zonge Engineering, now relocated from the Zonge bedroom to a former bicycle shop, was fielding crews for an increasing number of mining clients.

CR's FFT approach placed unprecedented demands on waveform stability, transmitter-receiver synchronization, and signal processing. At first, these were handled in a central recording truck with rack-mounted, AC-powered equipment. But greater logistical flexibility was needed for remote areas and for other electrical techniques. One of Ken's greatest contributions was development of a multichannel, backpackportable, computer-based receiver, the GDP-12, as well as a stable, high-powered transmitter. For field Zongies with the lungs and legs for it, the most inaccessible mining areas became fair game with the new gear. Equipment sales to international industry clients, even competitors, became a critical part of ZERO's services.

The GDP-12 opened up new geophysical vistas as a multipurpose system. In the late 1970s, Ken developed controlled-source audiofrequency magnetotellurics (CSAMT) as a practical exploration tool, and other techniques, including MT and TEM, were added. New applications were developed, often self-funded (confirming the "Research" part of the company name). One of the most significant was mapping CR effects of geochemical alteration overlying petroleum deposits, which occupied a good part of that research effort into the 1980s. Geotechnical and environmental work joined the mix of energy exploration in the following decade.

In the mid-1980s, a depression in mineral and petroleum prices nearly closed the company's doors. Zonge Engineering entered into Chapter 11 bankruptcy, laid off the staff, and awaited seizure by the bank. But Ken's indomitable spirit and support from his loyal employees pulled out a miracle. The company returned as a dominant force in electrical geophysics, added new staff, and expanded its offices in Australia and Chile. The Australian enterprise provided an especially fruitful collaboration between Australian and American geophysical talents and opened up a geologically demanding proving ground for Zonge equipment. New endeavors followed: a fast turnoff TEM system for UXO and expanded capabilities for the GDP-based equipment line.

In 2007, Ken turned 71 and moved toward retirement, selling the Australian

and Chilean subsidiaries and transferring the USA company to employee ownership under a new name, Zonge International. To mark his many notable accomplishments at this transition and to honor him personally, a special two-day seminar on IP and CR was organized at the 2007 SEG Annual Meeting. To our great loss, Ken Zonge passed away 21 November 2013. His family legacy includes his wife of 54 years, Kim; children Gene (electrical engineer), Tammy (fiscal operations manager), and Lynn (fluvial geomorphologist); and three grandchildren.

Ken did not seek industry accolades, but they sought him: best presentation award, 1975 SEG Annual Meeting; 1995 SEG Enterprise Award; 2002 American Mining Hall of Fame Medal of Merit; 2002 SAGEEP meeting general chairman; 2005–2006 Small Business Administration's Award for Excellence; 2011 EEGS/SEG-NSG Frank Frischknecht Leadership Award; and more than 50 publications and numerous presentations.

It would be impressive enough if these accomplishments were the sole substance of Ken Zonge's credentials, but that is hardly the case. They are matched by his legacy as a compassionate mentor and friend. Just by following him around for a day, you might learn more about applied science than in graduate school (some of us thought of him as "Zonge U"). He extended his mentorship to countless summer field-camp students at the University of Arizona by supplying equipment, field personnel, and free

pizza. He also established the Zonge Scholarship under the SEG Foundation for graduate students for research and development in electrical methods and instrumentation and a similar fund at the University of Alaska, Fairbanks.

Ken displayed an understated compassion that seemed boundless — whether it was a teetotaler Ken cheering a discouraged employee with the gift of a first-growth Bordeaux (who can argue with the Rothschilds?) or a cash-strapped Ken floating an informal loan to an employee who found herself with more month than money or a time-crunched Ken arranging tickets home for a bereaved international intern — his hand was an extension of his heart. The accountant always winced whenever Ken would conclude a phone call and walk her way with a concerned look on his face ... might as well pull out the checkbook.

These characteristics point to perhaps Ken's quintessential quality. Most would agree that his strong suit was not business management, but he had leadership qualities no M.B.A. program could imbue. He had the ability to *inspire*, to make you better than you thought you could be individually, and to make a group far better than the sum of its members. If he pulled 60 kg of electrical cables in the Arizona heat without complaint, you did too. If he squatted over a receiver to monitor data somewhere deep in the Outback, you did too — no standing around idly swatting flies. When he took a critical second look at data or a pet theory, you learned the



Kenneth Zonge works with colleagues as part of a field-training exercise.

value of healthy skepticism. And watching him treat a competitor with civility, you learned a valued lesson in humanity.

These traits rubbed off. During the company's financial crisis in the mid-1980s, a visibly pained Ken was forced to lay off the entire staff. The next Monday morning, a handful of employees turned into the gravel parking lot and went in to work as usual. Perplexed, Ken explained that he couldn't pay them. Their reply was yes, fine, but we need to get these reports out, and maybe we could talk about details like money another time. The reports went out, the pay didn't materialize for a long while, but the company recovered and eventually thrived. This outcome was the direct result of Ken's inspiring leadership. It was a privilege to work for him.

To have written this tribute in the past tense is somewhat misleading, for Ken still teaches us in the present tense. We think of his guiding example often as most of us hit the home stretch of our professional careers. Take risks and innovate. Work hard. Inspire others to be their best. Befriend those needing help. Be a mentor. Be humble in the face of both praise and criticism. Take our science and our professional responsibilities seriously. But never, ever take yourself so seriously that you think you're above getting out there to sweep off the front porch.

Larry Hughes¹, Lynn Zonge, Emmett Van Reed, Norman Carlson, Chet Lide, Scott Urquhart, Jeff Wynn, Gary N. Young and Jerry Roth

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SEG Kenneth L. Zonge Scholarship

Further details: foundation@seg.org

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Passing of Kim Zonge

It is with the deepest respect, that we express our condolences for the passing of Ken's wife, Kim Zonge, on 11 April 2014 at 9:15 am, at age 73 years. She is to be remembered as the rock of the family.

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Australian Capital Territory

The branch AGM was held on 6 March 2014. Prior to the AGM, eight members visited the Joint Australian Tsunami Warning Centre (JATWC) located and operated by Geoscience Australia. Tour guide, Hugh Glanville, showed us the systems and procedures that detect verify and warn the Australian (and international) community of potential tsunami impacts on Australia's coastline and external territories. The centre was established following the Boxing Day Tsunami in 2004. The principle objective of the JATWC is to provide emergency managers with as much warning as possible of a potential impact on Australia's coastline from tsunamis that are generated from earthquakes occurring on plate boundaries in the Indian, Pacific and Southern Oceans. 'Fortuitously' several small earthquakes occurred during the visit so we could see the process unfold. The centre provides 24 hour a day, seven days a week tsunami monitoring and analysis capability.

After a very busy year professionally and personally Carina Kemp stood down from her role as ACT branch President. Tim Jones who has started a PhD in 2013 at ANU (the topic is around reconciling the geophysical and geochemical mantles), stood down from his role as Branch Treasurer after 2 years. Millie Crowe continues in her role as Branch Secretary. At the AGM Marina Costelloe was elected as Branch President and Ross Costelloe was elected as Branch Treasurer. The 2014 committee members are Carina Kemp, Tim Jones, Bill Jones, Ron Hackney, Ray Tracey, Eva Papp and Ned Stolz. We would like to acknowledge the work the committee has done in the past 12 months and thank them for their continued support in 2014.

To celebrate the past years successes and the future year's opportunities, members of the ASEG joined with new and old committee members at Gryphons in

Griffith for a relaxing and enjoyable social event.

We will be hosting the 2014 Pacific South Honorary Lecturer Sandeep Chandola at GA on 17 March at 4 pm. Sandeep will be presenting his talk Marine Seismic Acquisition: 'Expanding the possibilities! Light refreshments will be available after his talk'.

Planning is underway for the FEDEX AGM being held in Canberra on Thursday, 10 April. The ACT branch is looking forward to showing members of the FEDEX why Canberra is Australia's most liveable city.

Marina Costelloe and Millie Crowe
ACT Branch President & Secretary

New South Wales

In February, we held our AGM and the usual suspects (myself, Sherwyn Lye and Roger Henderson) were elected to the roles of President, Secretary and Treasurer.

Following the AGM, Brian Spies, gave a talk on the science and politics of climate change. Brian's talk attempted to unravel the science from the politics, and discussed the importance of, and barriers to, achieving an international agreement on reducing emissions. The talk also included updates of the latest scientific observations and climate trends. Data from old and new climate change reports was presented and much discussion ensued after the 'official' talk had finished.

An invitation to attend NSW Branch meetings is extended to interstate and international visitors who happen to be in town at that time. Meetings are held on the third Wednesday of each month from 5:30 pm at the Rugby Club in the Sydney CBD. Meeting notices, addresses and relevant contact details can be found at the NSW Branch website.

Mark Lackie
NSW Branch President

Victoria

On Wednesday 12 February members of the ASEG Victorian branch enjoyed the joint ASEG-PESA-SPE Summer Social Function at the Boatbuilder's Yard in Melbourne's South Wharf.

On Friday 14 March we will have hosted SEG 2014 Pacific South Honorary Lecturer Sandeep K. Chandoola from Petronas who will present Marine Seismic Acquisition: 'Expanding the Possibilities!'. This will have been a noon-time lunch meeting at the Victoria Hotel.

On Wednesday 16 April we are looking forward to Richard Schodde from MinEx Consulting presenting 'The Rise and Rise of Geophysics: an Overview of Minerals Exploration Trends over the Past Century'. This will be an evening meeting at the Kelvin Club starting at 6pm (drinks and nibbles) for a 6:30 pm technical presentation. The annual AGM of the ASEG Victorian Branch will precede the technical talk. Due to relocation John Theodoridis is stepping down from his role as Secretary, and Theo Aravanis will shortly take up other ASEG responsibilities. Hence both the State Secretary and State Treasurer positions are up for nominations. Please forward your nominations to vicpresident@aseg.org.au.

On 30 April we will host the one-day SEG Distinguished Instructor Short Course (DISC): 'Microseismic Imaging of Hydraulic Fracturing: Improved Engineering of Unconventional Shale Reservoirs', by Shawn Maxwell of Schlumberger. For registration and payment for this course, please use the dedicated web site: <http://www.seg.org/education/lectures-courses/disc/2014/maxwell-schedule>.

We look forward to seeing many ASEG Victoria Branch members at the meetings in the coming months.

Asbjørn Nørhund Christensen
VIC Branch President

ASEG national calendar: technical meetings, courses and events

Date	Event	Presenter	Sponsor	Time	Venue
2014					
16 Apr	'The rise and rise of geophysics: an overview of minerals exploration trends over the past century'	Richard Schodde from MinEx Consulting		1800–2000	Kelvin Club, Melbourne
14 May	TBC			1730–1900	City West, West Perth
11 Jun	Albany-Fraser MT and seismic surveys	Catherine Spaggiari, GSWA, Perth		1730–1900	City West, West Perth
9 Jul	Frequency-domain full waveform inversion: applications to marine and land seismic experiment	Rie Kamei, UWA, Perth		1730–1900	City West, West Perth
13 Aug	Humanitarian geophysics	Jeff Shragge, UWA, Perth		1730–1900	City West, West Perth
10 Sep	New logging and sensing technologies for mineral exploration	Brett Harris, Curtin University, Perth		1730–1900	City West, West Perth
8 Oct	TBC			1730–1900	City West, West Perth
13 Nov	Honours and Masters Students Research Presentations	Various		1730–1930	City West, West Perth
10 Dec	AGM and Christmas Party			1730–2030	TBC
2014 SEG Pacific South Honorary Lecturer: 'Marine Seismic Acquisition: Expanding the possibilities!' Presented by Sandeep K. Chandola, PETRONAS, Carigali, Kuala Lumpur, Malaysia. http://www.seg.org/education/lectures-courses/honorary-lecturers/2014					
Date	State branch	–	–	Time	Venue
14 Apr	Hobart, TAS			TBA	TBA
2014 SEG Distinguished Instructor Short Course (DISC): 'Microseismic imaging of hydraulic fracturing: improved engineering of unconventional shale reservoirs' Presented by Shawn Maxwell, Schlumberger. http://www.seg.org/education/lectures-courses/disc/2014/maxwell-schedule					
Date	State Branch	–	–	Time	Venue
28 Apr	Perth, WA			0900–1700	Technology Park Function Centre
30 Apr	Melbourne, VIC			0900–1700	The Victoria Hotel
5 May	Adelaide, SA			0830–1630	Hotel Richmond
EAGE Distinguished Lecturer Programme (DLP): 1 hour Webinar Q&A on 16 July 2014 at 1300 EST 'Controlled source EM and magnetotelluric data for sub basalt imaging' Presented by G. M. Hoversten. http://lg.eage.org					
2014 SEG/AAPG Distinguished Lecturer: '3D seismic image processing for interpretation of faults and horizons' Presented by David Hale, Colorado School of Mines, Golden Colorado, USA Supported by CGG and Paradigm. http://www.seg.org/dl					
Date ^{TBC}	State branch	–	–	Time	Venue
4 Aug	Brisbane, QLD			TBA	TBA
5 Aug	Canberra, ACT			TBA	TBA
7 Aug	Melbourne, VIC			TBA	TBA
8 Aug	Hobart, TAS			TBA	TBA
11 Aug	Adelaide, SA			TBA	TBA
12 Aug	Perth, WA			TBA	TBA

TBA, to be advised; TBC, to be confirmed (please contact your state branch secretary for more information).