

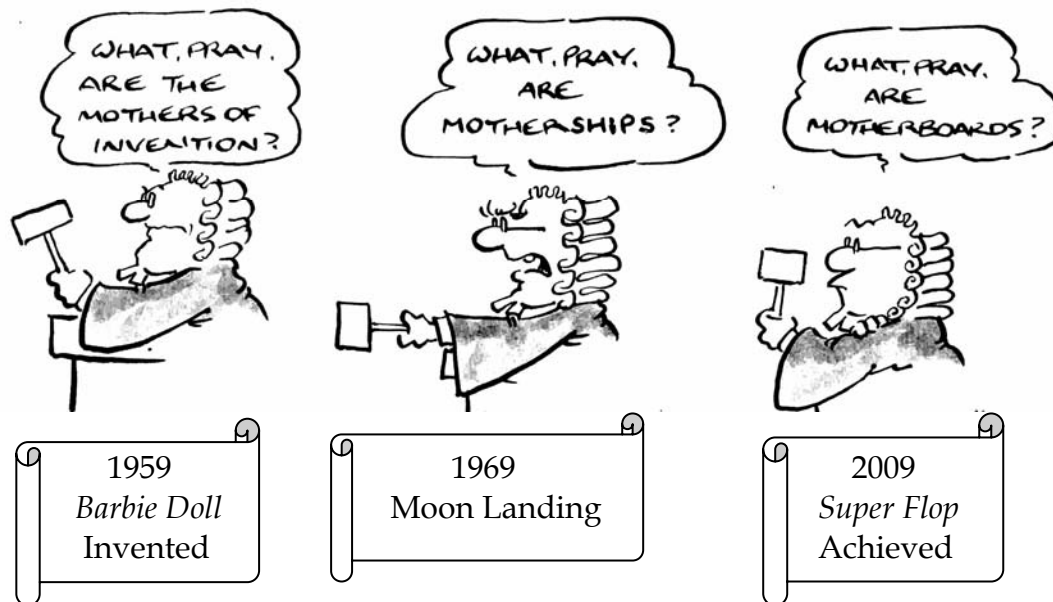
The Technology, Engineering and Construction List (TEC List)

- de force et de beauté

Hon. Justice Peter Vickery (Illustrated by Patrick Cook)

The Building Cases List of the Supreme Court of Victoria was established in 1972. It was, in its day, revolutionary. It was the first specialist list introduced into the Court and was the first managed list in Australia. The founding judge was Justice Clifford Menhennitt, who established the principles on which the List has been conducted for the last thirty-seven years.

Technological advances in this century have been breathtaking, and will undoubtedly continue in this vein. The amount of new technical information is now doubling every two years. A technical student who commences a course will find that by the time year three is achieved, much of the information learned in year one will be obsolete. On 25 May 2008, an American supercomputer built by IBM, named 'Roadrunner', reached the computing milestone of one petaflop¹ by processing more than 1.026 quadrillion calculations per second. This is a lot of flops. As one commentator has put it: "To put this into perspective, if each of the 6 billion people on earth had a hand calculator and worked together on a calculation 24 hours per day, 365 days a year, it would take 46 years to do what Roadrunner would do in one day."² Although it is little recognized, leading researchers say that these machines have pushed computing into a new realm that could change science and applied technology more profoundly than at any time since Galileo.³ Computers replicating the human brain will follow.



¹ In computing, a FLOP (or FLOPS) is an acronym meaning FLoating point Operations Per Second. The FLOP is a measure of a computer's performance, especially in fields of scientific calculations that make heavy use of floating point calculations (similar to instructions) per second. A petaflop equates to 10^{15} flops or 1000 teraflops.

² Ernst-Jan Pfauth, Editor in Chief, *The Next Web*

³ Mark Seager of Lawrence Livermore National Laboratory, Livermore, California, USA; Thomas Zacharia, head of computer science, Oak Ridge National Laboratory, Tennessee, USA.

In the light of rapid advances in technology, and the nature of disputes on technical matters which are likely to come before the Court with increased frequency, the question arises – is it now time to review afresh the fundamentals which have guided the operation of the List to this day?

In 1931 Norman Birkett KC prosecuted the case of *R v A A Rouse*.⁴ His junior was Richard Elwes. Mr Rouse was charged with the murder of a passenger of his car by setting light to it. The defence was that the fire was an accident. On the fifth day of the trial, the defence called an expert witness, Mr Arthur Isaacs. He said that he was an engineer with ‘very vast experience as regards fires in motor cars.’ He confidently advanced the theory that the junction in the fuel line had become loose, in the course of the fire, and not before. The cross-examination of Mr Isaacs by Birkett proceeded with legendary vigour and style:

What is the coefficient of the expansion of brass? --- I beg your pardon.

Did you not catch the question? --- I did not hear you.

What is the coefficient of the expansion of brass? --- I am afraid I cannot answer that question off hand.

What is it? If you do not know, say so. What is the coefficient of the expansion of brass? What do I mean by that term? --- You want to know, what is the expansion of the metal under heat?

I asked you: What is the coefficient of the expansion of brass? Do you know what it means? --- Put that way, probably I do not.

You are an engineer? --- I dare say I am.

Let me understand what you are. You are not a doctor? --- No.

Not a crime investigator? --- No.

Nor an amateur detective? ---No.

But an engineer? ---Yes

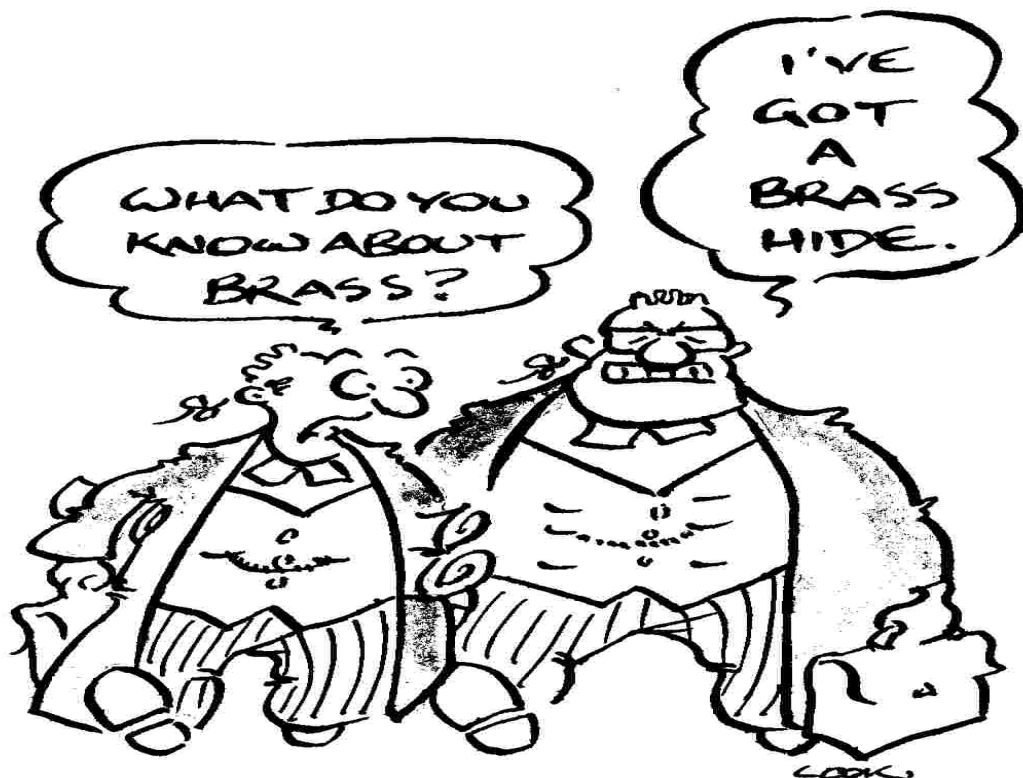
What is the coefficient of the expansion of brass? You do not know? – No; not put that way.

⁴ See: Julian Burnside QC *R v A A Rouse*, 124 Victorian Bar News, Autumn 2003, at 55-56

The cross-examination, which was no doubt successful in ridiculing and denigrating the defence expert witness before the jury, is not one which might be expected of a modern prosecutor. Birkett's question contained technical flaws. In the first place, brass, like most other materials, has two coefficients of expansion which are quite different – one for linear expansion, which is generally accepted as having the value 19, the other for volumetric expansion, which is generally accepted as 57. The Birkett question did not differentiate between the two, and in this respect was not capable of the single answer which he pressed for. Secondly, brass is an alloy comprised of copper and zinc, the proportions of which can be varied to create a range of brasses with different properties. Copper has a coefficient of linear expansion of 16.5, whereas that of zinc is 39.7. Consequently, no two types of brass behave in precisely the same way under heat and a range of values is possible, depending on the composition. For example, red brass has a linear coefficient of 18.7, whereas that of naval brass is 21.2.

Birkett probably did not have a sufficient grasp of metallurgical science to understand that his question was founded on these fundamental misconceptions. Defence counsel D.L.Finnemore sat mute. The trial judge, no doubt sharing the ignorance, did not lift a finger to rule the question unfair. The expert in fact provided an accurate answer to the question as it was put.

Birkett's advocacy secured the conviction of Rouse for murder. The appeal argued by Sir Patrick Hastings KC failed. Rouse was hanged at Bedford gaol on 10 March 1931.



Richard Elwes and Norman Birkett KC step out to prosecute A.A. Rouse

If mistakes of this magnitude could occur in 1931, given the advances in science and technology since that time, how much more vulnerable to error are the court processes of this century in cases involving sophisticated technical evidence?

In response to the challenge, in mid-2008 a review project called the 'TEC Project' was conceived to draw together under one management regime the three strands of related disputes in the areas of technology, engineering and construction.

The TEC Project has built upon what has gone before, and in particular the ground breaking work of Justice David Byrne in the development of Practice Note No 1 of 2008, 'Building Cases – a New Approach'. This commenced as a pilot project on 1 March 2008. The TEC List has drawn upon the experience gained over the last year in the operation of the 2008 Practice Note and, with some modifications, has incorporated the central features of the 'New Approach' into its own procedures.

The focus of the TEC Project was to produce a state-of-the-art approach to Technical, Engineering and Construction dispute resolution and case management for the first decades of this century which will achieve both practical and efficient working outcomes within a tolerable budget. The goal has been advanced with the benefit of extensive consultation with the Building Cases List Users Group. The Group includes leading practitioners in the field, industry groups such as the Master Builders Association and the Property Council of Australia, and recent representation from the Construction Law Program at the Melbourne Law School, the University of Melbourne.

The Project drew upon and adapted some of the most successful and innovative practices applied in other jurisdictions, such as the Technology and Construction Court (TCC) of the United Kingdom; the High Court of the United Kingdom; and the Court of Appeal of Rome ("Corte di Appello di Roma"). Other elements are the product of the Project's own work in developing procedures which are uniquely suitable to local conditions and available resources.

The TEC List is now a reality. On 26 March 2009, the Council of Judges of the Supreme Court approved the new rules. The List will commence operation on 19 June 2009.

The objective of the TEC List is to provide for the just and efficient determination of TEC cases, by the early identification of the substantial questions in controversy and the flexible adoption of appropriate and timely procedures for the future conduct of the proceeding which are best suited to the particular case. With the objective firmly in mind, a case conducted in the List will be managed with the co-operation of the parties to ensure its timely and economic disposition.

Matters to be admitted to the TEC List will include cases falling within the former definition of a "Building Case" as it applied to the Building Cases List. This has now been significantly expanded to include matters where it is alleged, for example, that a telecommunications or computer system, electrical or mechanical component or other technical device has failed, underperformed, or malfunctioned, and which involves an assessment of expert evidence of a technical nature.

TEC matters may therefore extend beyond the traditional building or engineering construction case to include, for example, breaches of warranties of performance of a technical component in a sale or supply contract. Such matters would encompass contraventions of the warranty provisions of a local supply contract or an international supply contract where the UN *Vienna Convention on Contracts for the International Sale of Goods* 1980 may apply in relation to goods imported from or exported to a signatory State. However, at least for the present, it is not envisaged that the TEC List would extend to cases in which the ownership or right to intellectual property such as patents, trademarks and registered designs is the central issue. This is in recognition of the fundamentally different specialisation involved in such cases.

It is not proposed that processes in the TEC List will be characterised by curial informality, which is not appropriate for a court. However, procedures may be appropriately shaped to the dispute at hand, consistently with the requirements of natural justice and procedural fairness. Within these necessary constraints, the contemporary adage '*let the forum fit the fuss*'⁵ may be given ample scope to flourish.



⁵ See: Rosenberg, M. "*Let the Tribunal Fit the Case*", remarks at a meeting of the American Association of Law Schools (28 December 1977), reprinted in 80 F.R.D. 147, 166 (1977). Maurice Rosenberg, a Columbia law professor, coined the phrase "let the forum fit the fuss" to describe the process of identifying the nature of the dispute, the needs and interests of the parties and the best dispute resolution option in the circumstances, the ultimate goal being to avoid a long, drawn-out process.

A TEC case should be approached like any technical, engineering or construction project, with time and cost budgeting. This will necessarily involve adopting procedures which are proportionate to what is at stake in the dispute by reference to such matters as: the amount of money involved; the importance of the case to the parties and generally; the complexity of the issues; and the financial position of each party.

It will also involve allotting to the dispute an appropriate share of the Court's resources, taking into account the need to allocate resources to other cases.

To this end:

- parties will be expected to have engaged in serious settlement discussions before the commencement of the proceeding;
- at an early stage a Judge will be assigned to assume responsibility for the management of the case;
- Judges will be more active and pro-active in exercising their powers to achieve a just resolution of TEC cases in a speedy and efficient manner;
- Judges will be mindful of the need not to apply the resources of the parties or the Court needlessly or in a manner which is out of proportion to the matters in issue;
- Legal practitioners will be expected to approach their cases co-operatively and with the same goal in mind. They will be encouraged to focus on the central issues in the case.

In order to give teeth to the objective of the List, a number of innovations are included in the practice of the new List. The trial Judge will have access to a 'smorgasboard' of procedures designed to promote a cost effective mechanism which is tailor made for the management of the individual dispute.

A feature of the new approach will be the early convening of a resources conference after the pleadings are closed. This conference will be convened by the Court and chaired by an Associate Judge. The purpose of the resources conference is to establish a resources budget for the litigation for the use of both the Court and the parties. The outcome will assist the Court in appointing the TEC trial Judge and allocating a trial date. The conference will also identify issues for mediation and the information and investigation required to enable effective settlement discussions to take place at the earliest possible opportunity. It will be relatively informal and the Associate Judge may, in appropriate cases, conduct part of the conference on a without prejudice basis and speak separately with the parties.

Another innovation will be the appointment of assessors in trials conducted in the TEC List, where it is appropriate to do so. The Court in TEC cases will be confronted with very complex and sophisticated technical evidence which is likely to be presented in a range of matters on an unprecedented scale. The current position with such cases is that, virtually overnight, the trial Judge is expected, after a crash course conducted by counsel and the expert witnesses, to become an expert in an arcane field of science or engineering.

It is unrealistic to expect Judges to approach such cases without specialized technical assistance. Failing to adequately equip the trial Judge in these circumstances can cause unnecessary stress for the Judge, give rise to excessive cost expended in court hearings to ‘educate’ the Judge, bring about delay in the delivery of the judgment, and potentially give rise to a less than adequate, or even a plain wrong, treatment of the technical issue in the judgment. Confidence in the administration of justice in some cases could be eroded.

Section 77 of the *Supreme Court Act 1986* already provides for the Court “to call in the assistance of one or more specially qualified assessors and hear the proceeding wholly or partly with their assistance.” In Victoria this provision has been rarely been called upon. At least in part this has been due to the lack of clear guidelines as to the appointment of the assessor and the role which the assessor is to play in the trial and the lack of any guidelines directed to preserving transparency, natural justice and procedural fairness. The TEC Practice Note includes a detailed procedure designed to accommodate these critically important interests, while at the same time providing a facility to enable the Court to apply the necessary skill to the technical issues which will inevitably confront it. It is to be emphasised that the Court is to be assisted in its proper function by the expertise of the appointed assessor. The assessor will make no findings. The judgment is that of the trial Judge who will remain responsible for it.

Other interesting innovations in procedure will also apply to cases in the TEC List. These include: a power for the Court to order a limited time trial (or “chess clock procedure”); a facility to provide electronic rulings on proposed evidence, as employed recently by the Court⁶; directions for the delivery of witness statements, either by way of exchange or in sequence or in stages by reference to issues, and the provision of summaries of evidence in lieu of or in addition to witness statements;⁷ directions in the appropriate case for ‘e-disclosure’; directions that that some or all of the issues raised in the pleadings be reduced to a Statement of Issues which may be settled by the Judge in consultation with the parties, and directions that the proceeding or part of the proceeding be conducted thereafter in accordance with and by reference to the Statement of Issues; directions that representatives of the parties attend at a directions hearing; and directions that the trial or part of the trial be conducted by a trial of a sample or samples of alleged defects or a sample or samples of other appropriate subject matter (for example, a trial of selected samples of multiple welding defects which fall into defined categories).

The practice of the new TEC List is set out in a TEC List Practice Handbook. The Handbook cover has a brick red background to emphasise the building origins of the List, which has provided its solid foundation to date. It also displays the List’s new logo - Pablo Picasso’s *Composition in Three Colours* (1947). Thanks are extended to Marina Picasso and the estate of the late Pablo Picasso for its use. The striking Picasso image draws together the three strands of human enterprise represented in the List - technology, engineering and construction, and embodies its hard-edged theme – ‘*New Perspectives in TEC Case Management*’.

⁶ See: *Nicholson v Knaggs* 27 February 2009 (Sup. Ct. of Victoria) [2009] VSC 64 at [29-34]

⁷ See: *Downer EDI Mining Ltd v Iluka Resources Ltd*. 5 August 2008 (Sup. Ct. of Victoria) [2008] VSC 622

Gustave Eiffel once said in reference to his most celebrated project: *'Ah, bien je prétends que les courbes des quatre arêtes du monument, telles que le calcul les a fournies, donneront une grand impression de force et de beauté.* [Well, I think the curves of the four pillars of the monument, as the calculations have provided them, give it a great sense of force and beauty.]



The TEC Rules will not produce a thing of 'beauty'. However, the new perspectives will provide an opportunity to fortify the many creative endeavours which do.
