

## Introducing the

# Australian Safety Critical Systems Club

**From chemical, manufacturing, transport and power to medical, defence and telecommunications and mining, there is an ever-increasing reliance on systems containing software to control processes, many of which have the potential for harm. But information technology is still very much evolving, prone to errors, and generally not well understood. It can conceal hazards and even introduce new ones.**

**T**he Club is a non profit organisation established for promoting the co-operation of academic, industrial, commercial and governmental organisations in relation to the practice and advancement of safety-related systems, in particular those systems containing software in Australia.

### **The Club's purpose is to:**

- Provide a national focus and forum for its members who have an interest in safety-related systems, particularly those systems containing software.
- Provide professional club services for all categories of its membership.
- Stimulate the active contribution and participation of its members in the development and dissemination of safety-related systems knowledge and to support the activities of the Society.
- Foster and support education and training associated with all aspects of safety-related systems.
- To provide learned society functions for individuals and industry groups and to provide practice based opinion and advice for the Society.

Membership of the Club is open to anyone involved in the development of safety-related systems, or with interest in system safety issues. The Club would also be relevant to those interested in the assurance of system reliability, availability, maintainability and safety (RAMS). Membership of the Australian Computer Society is not a prerequisite for Club membership.

To guide the Club's establishment, an interim committee has been established; this committee consists of the members of the Australian Computer Society's National Committee on Safety-Critical Systems. This interim Club committee is:

<b>Chairman</b>	George Nikandros
<b>Secretary</b>	Kevin Anderson
<b>Treasurer</b>	Chris Edwards
<b>Members</b>	Peter Lindsay Tony Cant Jacqui Newbegin Allan Coxson Clive Boughton

For more information visit the Club's web page at [www.safety-club.org.au](http://www.safety-club.org.au)



# Why an Australian **Safety Critical Systems Club**?

**The UK has had a Safety Critical Systems Club since 1991. It is through the existence of this club and the drive of the people involved that there is a high level of awareness in both government and industry in the use of systems containing software in the UK. The club provides many forums to facilitate the transfer of information and knowledge in the safety-critical systems domain.**

Its success however was very much due to the generous financial support by government and industry organisations during the Club's formative years.

The fact that only now a similar club is being formed in Australia in no way should suggest that Australia, and in particular the Australian Computer Society has been idle.

In 1991, Dr Paul Farrow suggested to the Australian Computer Society's Director of the Computer Science Software Engineering Board, Assoc Prof Karl Reed that given the increasing persuasiveness in the use of systems containing software, there was a need to raise awareness of the safety issues associated with the use of such systems in Australia. Farrow's suggestion resulted in the formation of the Australian Computer Society's National Technical Committee on Safety-Critical Systems in 1992.

Membership of the committee was by invitation; with prospective members invited with the aim of having a wide industry representation. Since the formation of the committee, the industries represented have been defence, transport (rail and air), therapeutic goods, academia, and consultants (risk and safety management).

The committee had none of the financial backing of the UK Safety Critical Systems Club. In fact membership of the committee was and remains voluntary. The committee's achievements and activities to date have been possible only through the generosity and support by the members' own organisations and giving of their personal time.

## **Major achievements of the committee have been:**

- The creation of the ACS Policy on Safety-Critical Systems in 1996;
- The Australian Workshop on Industrial Experience with Safety Critical Systems and Software run annually since 1996;
- The development of the Standards Australia Handbook (HB 220-2000) Safety issues for software on behalf of the Standards Australia Subcommittee IT/15/15;
- Development of a syllabus leading to possible certification in safety-related systems.

In 2001, the committee debated its future. A number of initiatives were identified over the years, but because the effort required – far more than that required for a spare time activity, they had not been progressed. Such initiatives include:

- The development of competency and training requirements for all stakeholders having a role in the life-cycle of a safety critical system;
- Participation on standards committees;
- Conduct of reviews on industry standards, highlighting pitfalls and limitations.

## Why an Australian Safety Critical Systems Club? (con)

Whilst the committee had managed to raise some awareness in Australia through the workshops, the level of awareness did not seem to be increasing, or at least increasing at a fast enough pace. Whilst the workshops provided excellent opportunities for networking, there was no mechanism for sustaining such contacts.

The 2002 workshop held in Adelaide was by far the most successful with some 80 attendees compared to the 40 attendees for each of the previous workshops. The success in 2002 was very much due to the line-up of international speakers able to be sponsored through the accumulated profits of the previous workshops and sponsorships.

However such a quality bill of presenters can not be sustained without an income stream. A 'club' would provide such an income through registration fees, whilst providing the opportunity for members to influence the activities undertaken ■

## Club Matters

### Membership

Membership subscriptions for financial year 2003/04 are now due. Notices will be issued in the near future.

### Club Launches –

#### Brisbane 26 October 2003

Since October 2002, there have been club launch events in Perth, Adelaide, Melbourne, Canberra and Sydney; Brisbane's launch is scheduled for 26 August 2003. The intent of these launches has two purposes 1) introduce the club and 2) to sew the seeds for a formation of a Club chapter. These launch events have been of mixed success.

For details on Brisbane's Club Launch visit

[www.safety-club.org.au](http://www.safety-club.org.au)

### Annual Workshop –

#### Canberra 9-10 October 2003

The 8th Australian Workshop on Safety Critical Systems and Software will be held in Canberra, 9-10 October 2003. The purpose of the workshop is to provide a forum for practitioners and researchers associated with safety-related systems involving software to report their experiences to advance understanding. Papers are refereed and published.

For more details visit

[www.itee.uq.edu.au/~pal/ACS/SCS\\_workshop.html](http://www.itee.uq.edu.au/~pal/ACS/SCS_workshop.html)

## Chapter Events

### Other Events

#### Other events which may be of interest to Club members:

September 3-5, 2003 Sydney, Australia 9th International Software Metrics Symposium in conjunction with the Australian Conference on Software Measurement.

<http://metric.cse.unsw.edu.au/Metrics2003>



September 23-26, 2003 Edinburgh, UK The 22nd International Conference on Computer Safety, Reliability and Security.

[www.dcs.ed.ac.uk/home/safecomp/Download/safecomp2003/](http://www.dcs.ed.ac.uk/home/safecomp/Download/safecomp2003/)



October 6-9, 2003 Cambridge, UK Twelfth Residential Course on Safety Critical Systems

[www.iee.org/pn/functionalsafety](http://www.iee.org/pn/functionalsafety)



February 10-12, 2004 Birmingham, UK Safety-critical Systems Symposium 2004

[www.safety-club.org.uk](http://www.safety-club.org.uk)



#### ASCSC Committee News

Australian Safety Critical Systems Club  
From the Secretary 5 August 2003:  
For the Members

## Committee News

**ACS NSW Launch** held 1 July at ACS NSW – 15 attendees, 5000 flyers sent out with ACS/NSW April May Branch News.



**ACS QLD Launch** organised 26 August, flyers sent 5 August.



**Next Committee Meeting**, 26 August to finalise paper for Canberra Workshop; 9-10 October 2003. Workshop registration forms will be posted 27 August.

Correspondence:



#### Events Calender:

<http://www.itee.uq.edu.au/~pal/ACS/SCS Club/SCSclub.html>

#### An interesting site:

<http://www.risknowlogy.com/>

Information on Societal Risk:

<http://www.hse.gov.uk/research/rrpdf/rr035.pdf>

CEMACS meeting being followed up. ROI to follow.



**Research by UT**, Sydney into Software Process Improvement. You can contact Mahmood Niazi at 61-2-9514 4441 or email [mkniazi@it.uts.edu.au](mailto:mkniazi@it.uts.edu.au); or his supervisor Associate Professor David Wilson at 61-2-9514 1832 or email [davidw@it.uts.edu.au](mailto:davidw@it.uts.edu.au)

## More About Events

### Reliability 2003

6-10 October 2003 Palm Meadows Queensland

<http://www.reliability.com.au/>



### ERA Safety & Reliability Group Course

'Principles of Hazard and Risk Analysis'

2-3 September 2003 and 9-10 June 2004.

Call the Events Team on: +44 (0) 1372 367 117

or e-mail: [events@era.co.uk](mailto:events@era.co.uk)



### Cambridge Course:

#### Twelfth Residential Course on Safety Critical Systems

Moller Centre Cambridge, UK

6-9 October 2003 Safety Critical Systems

The course has been organised by IEE  
Functional Safety Professional Network

For more information on the  
IEE Professional Network please visit

[www.iee.org/pn/functionalsafety](http://www.iee.org/pn/functionalsafety)



### SQA NSW

11 August Mr Stedroy Farrell on

CMMI for THALES global initiative

<http://www.ozemail.com.au/~sqain>

### Metrics 2003

9th International Software Metrics Symposium;

In conjunction with the Australian Conference  
on Software Measurement ACOSM 2003:3-5

September 2003, Sydney;

Website:

<http://metric.cse.unsw.edu.au/Metrics2003/>

The International Software Metrics Symposium has become the premier international software measurement conference, providing a respected forum for the publication of the latest research in the domain of software measurement. This is a broad domain encompassing measurement education, methods, tools, processes, standards and the application of measures for management and improvement purposes.

However, the common strand is the belief in the importance of applying objective evaluation in decision-making concerning the acquisition, supply, operation, development and maintenance of computer software.

SCS Members, please circle SQA on Registration Form for member discount.

**SETE 2003**

**Systems Engineering /Test and Evaluation Conference**

The SETE 2003 theme is 'Practical Approaches for Complex Systems' in recognition of the broad applicability of systems engineering and systems thinking and analysis to complex problems encountered across all sectors of industry and government including telecommunications, medical research and practice, civil engineering and building, aerospace, public transport, taxation, social security and defence. In particular, the increasing recognition that systems that result from large projects are, themselves, often parts of larger systems (a concept known as 'systems of systems' or meta-systems), has given rise to new approaches to dealing with system development and operation at this higher level of complexity. SETE 2003 seeks to highlight these approaches and to provide an opportunity for systems practitioners to be exposed to applications across a variety of industries.

Abstracts, papers and presentations must be submitted in the required formats through the conference web site at

**<http://www.iceaustralia.com/sete>**  
 or by email to **[sete@iceaustralia.com](mailto:sete@iceaustralia.com)**

Guidance for authors of refereed papers is also available on the SETE 2003 website.

**Systems engineering for defence, aerospace & other technology based sectors**

**Sydney:**

4–8 August 2003  
 9:00am – 5:00pm

**Adelaide:**

15–19 September 2003  
 8:30am – 4:30pm

**Melbourne**

13–17 October 2003  
 8:30am – 4:30pm

**Canberra**

27–31 October 2003  
 8:30am – 4:30pm



**Course fee**

\$2254 inc. GST, groups  
 (3 or more) less 10%

Conditions apply – see [www.taa.com.au](http://www.taa.com.au) for detailed course description, conditions and on-line registration.

Or call Maryanne Murphy on +61-3-9876 7345.



**Engineering Education Australia System Safety Assurance**

presented by  
 Kevin Anderson

**Brisbane**

30 September – 1 October

**Melbourne**

28–29 October

**Sydney**

12–13 November

**[www.eeaust.com.au](http://www.eeaust.com.au)**