

The Safety Critical Systems Club
Accredited Certification to IEC 61508:
Why? What? How and Where Next?
5 March 2002

The CASS scheme:
HSE position

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The CASS scheme: HSE position

- HSE position on IEC 61508
- Conformity Assessment & the CASS Scheme... HSC/E position
- Current position of IEC 61508
- Concluding remarks

***The CASS scheme:
HSE position***

HSE position on IEC 61508

HSE position on IEC 61508

- IEC 61508 will be used as a reference standard for **determining whether a reasonably practicable level of safety has been achieved** when E/E/PE systems are used to carry out safety functions.
- The extent to which HSE will use IEC 61508 will depend on individual circumstances; **whether any sector standards based on IEC 61508 have been developed and whether there are existing specific industry standards or guidelines.**
- HSE PES documents (first published in 1987) have now been withdrawn.

***The CASS scheme:
HSE position***

***Conformity Assessment & the
CASS scheme...HSC/E position***

***Promoting Health & Safety at work
through conformity assessments
.....with specific reference to electrical,
electronic & programmable electronic safety-
related systems***

***Health & Safety Commission:
Policy Statement on Conformity
Assessment***

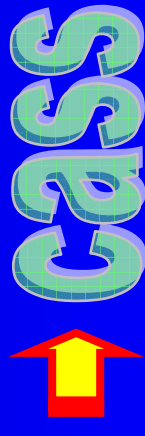
HSC Policy Statement on Conformity Assessment

- HSC sees Conformity Assessment (CA) as having the potential to contribute to the development and maintenance of suitable levels of health and safety at work
- HSC will seek to use CA where it is appropriate means of achieving this goal
- The degree of involvement in CA schemes by HSC will be dependent upon the a number of factors

HSC Policy Statement on Conformity Assessment

The key options for CA being:

- Direct approval by HSC/E
- HSC proposed development of CA scheme
- Stakeholder development of CA scheme solely on **health and safety grounds**
- Stakeholder development of CA scheme for **trade, or other grounds**, but which has **health and safety implications**



HSE's position on the CASS scheme

- The CASS scheme is within the framework of the HSC Policy Statement
- HSE has been actively involved in the development of CASS and recognises the importance it can play in giving users confidence that, for example, a safety-related system meets the requirements of IEC 61508
- HSE will participate in the continuing development of CASS and will work to ensure that it is a scheme of integrity and that it fulfils its stated aims

***The CASS scheme:
HSE position***

Current position of IEC 61508

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- All Parts now published
- Was recently out for voting in Europe for acceptance as a CENELEC standard
 - ✓ the standard received a positive vote
 - ✓ all Parts were ratified by the CENELEC Technical Board meeting in July 2001
- Maintenance has started in IEC [MT12 & MT13]; target date for the amended version scheduled for 2006
- Meeting of MT12 & MT13 to assess the comments received from NC's held on 27/28 February 2002

Maintenance programme for IEC 61508

- All 7 Parts to be maintained in a synchronised manner in order to ensure that the revised version of IEC 61508 is coherent in all respects
- The basis of the amendments will be based primarily on the comments from National Committees (NC's)

Maintenance programme for IEC 61508

<u>Milestone</u>	<u>Target date</u>
Maintenance Cycle Report finalised	February 2001
1st request to NC's for comments	February 2001
2nd request to NC's for comments on	October 2001
Consideration of NC comments by MT12 & MT13	February 2002
Maintenance Cycle Report to be sent to IEC/SC65A	March 2002
CD issued to NC's for comment	June 2004
CDV issued to NC's for comment and voting	February 2005
FDIS issued to NC's for voting	November 2005
Complete revision of IEC 61508; Parts 1-7	March 2006



Completed



Planned

Current position of IEC 61508

- Issues to be considered by IEC MT12 & MT13
 - Comments from users of the standard;
 - COTS/SOUP (HSE issue Report & will seek comments);
 - Proven in use issues;
 - digital communications (Task Group under MT13);
 - simple functionality/low complexity systems;
- IEC Introductory Guide being developed ...aimed at newcomers to the standard (IEC WG14)
- FAQs on IEC web site [iec.ch]

***The CASS scheme:
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Concluding remarks

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HSE is working with industry and others to facilitate the safe and effective use of IEC 61508. Including:

- Working with industry to understand their concerns and facilitate resolution of problems
- Standards developments
- FAQs web site
- IEE Competency Guidelines development
- Facilitating training schemes/ working with training providers
- HSE guidance on functional safety
- IEE “Functional Safety” PN being developed

Concluding remarks

- Complex systems are with us and will probably get more complex..we need an approach that delivers functionality with functional safety
- IEC 61508 and its sector implementations offer a systematic approach and a safe route forward for the safe development of E/E/PE safety-related systems
- HSE is participating in the continuing development of the CASS Scheme and will work to ensure that it is a scheme of integrity and that it fulfils its stated aims

***The CASS scheme:
HSE position***

Transion