

# THE BACKGROUND AND AIMS OF PROFUSE

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**Synopsis: the aim of this paper is to show the contribution that Profuse has made to the promotion and communication of the use of fuse and fused technology in Europe and the rest of the world, the origins and background of the organisation and how it aims to assist both the educational and user worlds in their appreciation of the vital need to use this seemingly simple but technically complex product.**

Within the electrical protective industry there had been over the last 2 decades an accelerated move to use circuit breakers as a protective device but now the technical and educational world is recognising that the fuse, which had been decried as dated and a dinosaur, actually gives economic, environmental and technical advantages.

With this scenario a group of European fuse link and fused equipment manufacturers came together on June 5, 1998 to discuss how they could “Convey Knowledge on the use of Protective Devices” to the world at large and the educational areas of both the user and student world.

The founder members were Katko from Finland, MEM from the UK, Holec from Holland who are now both part of the Eaton Organisation, Ferraz Shawmutt from France who now have a worldwide connection, M. Schneider from Austria, Weber from Germany and Socomec from France and by September of 1998 the articles of Association had been registered.

Since then the numbers of members have changed upwards but due to current market trends of mergers and takeovers we now have 11 members but if this was broken down into companies who were individual members the actual base is 16 of whom 5 are on the Administrative Board. The members come from a wide range of disciplines but are all manufacturers of fuses or fused equipment, sometimes both and vary in size for example from a multinational company such as ABB or a company with a national base but an international market such as say OEZ. Though the members are fuse based many of them manufacture within their own

company circuit breakers recognising the parallel benefits of both products.

Each year a General Meeting is held to discuss matters of current interest and to attempt to ensure that any market trends are noted and to take advantage of the individual strengths of the members to spread technical benefits to the wider world.

So what simplistically are the benefits of fuse technology, which I am sure most of you are aware, how do we communicate them and where do we see Profuse contributing in the future.

Let us for completeness state some simple benefits which in this ultra conservative world must be considered

- HRC Fuses are safe at all fault levels when used correctly
- As new operation after all faults
- Availability and interchangeability worldwide
- Simple safe consistent operation
- Proven technology in a modern environment
- Energy limitation so smaller cables needed
- Lower energy use than most protective devices
- All products tested to more onerous conditions than would be encountered in any application

So having recognised there are benefits how do Profuse communicate this information to a sceptical world or to a user who is unaware of any possibility of using any product apart from a circuit breaker. Here it must be stated that Profuse is not anti breaker but strongly in favour of the fuse benefits. In fact in an ideal world the two together is probably the best solution from a technical stand point. If we turn back to the early days then the mode of communication was simplistic in that hand outs were provided stating both the advantages and varying applications of fuses but not looking further in the real education of how to use a fuse and its varying component parts.

Hence the move was to a website which over the years has developed into a technical tool both for the members of Profuse, the fuse and fused equipment user and the student. The address is [www.profuseinternational.com](http://www.profuseinternational.com) and here are found technical papers and application notes written by the members and specialists to augment the members inherent knowledge plus a selection of papers, thanks to "The Fuse Club" from the last ICEFA Conference. This information contains everything from the FAQ's to details on individual components. So in this way we communicate knowledge, though an approach to an individual member will always provide the needed assistance. Within the website considerable technical documentation exists from both application guides on both low and medium voltage applications, interpretation and advice on standards plus sections on frequently asked questions in respect of design and use of fuses and the associated equipment.

Another area of particular interest is the environment, where, in addition to the ecological benefits in fuse use, product recycling is important, outside of the current requirements of the WEEE directive. This started in Germany and now through company contact is spreading initially Europe wide but we trust will continue to spread further. The initial costs encountered in any product using say copper are high but for a fuse, recycling used fuses yields copper at a lower cost than initially mining the material. More details on this topic can be found either on the Profuse web site or the papers from the last ICEFA Conference.

And as final typical area where we are trying to aid the market in knowledge we must consider safety be it in the field of application notes or the use of materials, topics such as "Arc Flash" which is a major problem in certain parts of the world are considered and advice given where appropriate.

So what of the future where energy costs continue to rise and product size to diminish with safety being the watchword in a more demanding environment, a greater need for communication of safe solutions is needed and here due to the constant technical updating of information via the Profuse network we trust the evidence for the fuse solution will be available from Profuse and its members.

These are some thoughts on Profuse, an organisation in mainly Europe, crossing country borders with support from Trade Organisation in the various countries but basically a professional organisation of companies supporting fuses and fuse technology and trying to communicate

information on safe and economical protective systems.