

The George Boole Foundation

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An introduction to the Foundation

The need for a national organization¹ to disseminate information on the work of George Boole and of the evolution in practical applications arising from his work is important for the following reasons:

1. Boole's method of reduction used in the design of electrical circuits has endured for over 75 years. Even today the efficient design of smaller and higher performance circuits still relies upon Boolean logic and the process of Boolean reduction.
2. The interest in 5th Generation computers, expert systems and knowledge based engineering during the 1980s served to expose the foresight of George Boole. George Boole originally identified his calculus and mathematical logic as a result of having set out to explain how humans use knowledge of relationships to take decisions on the basis of a deductive process. Boole had sought to work out how people think and how they infer and arrive at conclusions under circumstances of varying probabilities of events. This provided the main foundation for modern decision analysis.

As decisions become more complex with globalization and the accelerating pace at which decisions need to be taken, the quality of decision analysis is taking on vital importance. Boole's seminal work provides the essential foundation for the application of digital devices in deduction and decision analysis through expert systems and knowledge engineering. Boole's contribution is important to any process where decision-making aims to reduce the use of resources, to lower costs and minimize the risks of achieving objectives ranging from complex miniature circuit design to environmental protection.

In spite of George Boole's vitally important work there is no national institution established in his honour which disseminates information on his contributions as well as to assist industry, governance and society, as a whole, to take full advantage of the benefits to be derived from the broader application of decision analysis where the central operational functions make use of Boolean Logic.

The George Boole Foundation aims to establish an Institute which will carry the name of George Boole to commemorate his contribution as well as promote and disseminate useful information on his work. In order to achieve this the George Boole Foundation is launching and managing the appeal for the funding of the following activities:

- The establishment of The George Boole Institute by 2012 or thereabouts
- Decision Analysis Initiative (extension, training, seminars, workshops & demonstrations)
- The work of The Boolean Society (publication series)

Details on the complementary role of each of these activities can be found in the GBF Brief 03 "The George Boole Institute" and further information can also be found at:

<http://www.boolean.org.uk>

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¹ with an international role