Fortran’s Relevance Today and in the Future

*Peter Crouch, Chair of Fortran Specialist Group*

**Introduction**

Peter explained that although a lot of people think Fortran is outdated, in fact it is still very much used today.

**History**

He went through the history of Fortran. The first Fortran compiler was introduced in 1957, and 25 years later at a Fortran Pioneers event, John Backus leader of the pioneers wore jeans, even at the formal banquet!

The first (US) Fortran standard was introduced in 1966, and Fortran became an ISO standard in 1972. The BCS specialist group was established in 1970 and has been very involved in working with national and international standards bodies developing the standards for Fortran over the years. In 1991, the Fortran 90 standard moved away from fixed form source code and introduced many modernising features to the language. There have been several revisions to the standard, the most recent was Fortran 2008 released in 2010. Members of the Fortran specialist group attend the WG5 meetings which take place in different locations each year to develop ISO standards. Their attendance has been partly funded by BCS since 2003.

The Fortran specialist group marked the 50th anniversary of the first Fortran compiler with a joint meeting with the Computer Conservation Society in 2007.

**Today**

Today there are a lot of applications for Fortran.

- Weather forecasting and climate prediction
- Analysis of seismic data for oil and gas exploration
- Financial analysis
- Vehicle crash simulation
- Analysis of data from space probes and satellites
- Modelling of nuclear weapons and test ban verification
- Computational fluid dynamics

The source code now looks more like C code, but Fortran is still used because of its efficiency in many scientific applications. There is also a lot of legacy Fortran still around.

**Further information**

If you are interested in exploring modern Fortran further, working source code for the example program outlined on slides 19 to 22 of Peter’s PowerPoint presentation is available by contacting him at pccrouch@bcs.org.uk.