

Unsung Heroes

of Fortran Development

Revised version of a presentation given at the WG5 meeting, Berkeley, June 2018

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1966 - World's first programming language standard

1970

The British Computer Society set up a group:

- (a) to form a focus in the United Kingdom for work concerned with establishing and maintaining FORTRAN standards.
- (b) to work in association with national and international standardisation bodies.

Working parties were established on:

- Existing vendor extensions
- Small machine Fortran (up to IBM 1150)
- Conversational Fortran
- Diagnostics

And the whole group discussed desired extensions in next standard, then assumed to be published in 1971 or 1972

Paul Samet



Professor of Computer Science, University College London
Member, SEAS Board
President, British Computer Society 1977-78

Invited J.C. Noll to talk on Fortran at the SEAS
conference in Pisa, September 1971

Funded Colin Day to attend a meeting of
ISO/TC 97/SC 5 in Washington in 1972

(https://fortran.bcs.org/1972/fortran_in_washington_1972.pdf)

Language Standards in the early 1970s

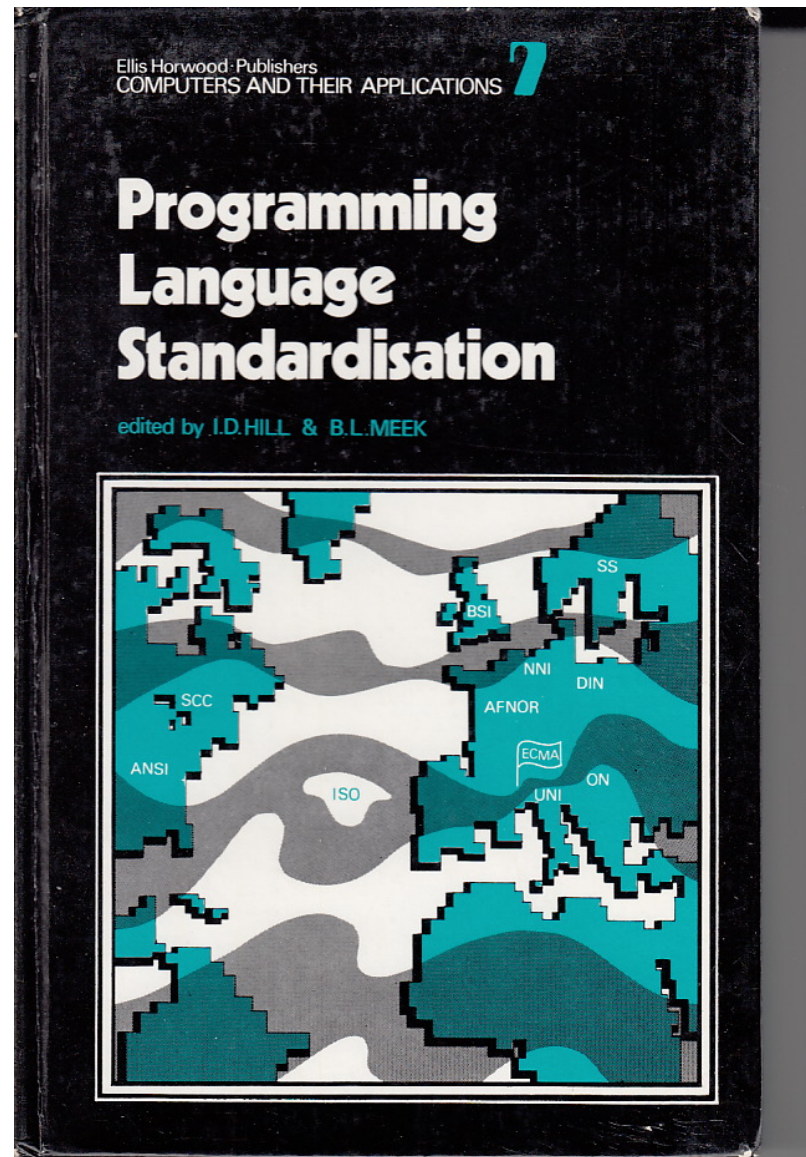
Algol	IFIP
Cobol	US
Coral	UK
Fortran	US
Mumps	US
Pascal	UK
Pearl	Germany
PL/I	US
Real-Time Fortran	EWICS
RTL/2	UK
Basic	ECMA, Japan, UK, US all independently!

Brian Meek



Prime instigator behind the Hague Agreement in November 1977, whereby ISO member bodies agreed to collaborate more closely on developments

(https://fortran.bcs.org/standards/mEEK_hague_1977_report.pdf)



(Published 1980 - Fortran chapter by Walt Brainerd)

First ISO Fortran Experts Meeting, London, November 27-30, 1978

Participants:

Austria (1)	G Schmitt
Canada (1)	B Swain
ECMA (1)	M Munchhausen
Germany(1)	K H Rotthausen
Netherlands (3)	C G F Ampt, L Noordhuizen, P A J Penders
Sweden (1)	I Dahlstrand
UK (13)	P A Clarke, C Day, J F Dunn, S J Hague, I D Hill, D T Law, B L Meek, J D Murchland, D T Muxworthy, J Nelder, G Stacey, A J H Walter, J D Wilson
USA (15)	J Adams, W Brainerd, J Engle, M Freeman, M N Greenfield, R Grove, D Hendrickson, F E Holberton, J E Lauer, J H Matheny, L P Meissner, R W Signor, J L Wagener, E H Whitley, A Wilson

Discussing what was planned to be Fortran 82

Before the 1988 WG5 Meeting in Paris, September 19-23, 1988

Language plans under consideration by X3J3:

- Weaver's plan
- Philips's plan
- Reid/Smith plan
- ABMSW plan

France unhappy about pointers and significant blanks

Germany unhappy about lack of BITs and varying length strings

Japan unhappy about multi-octet character proposals

Netherlands unhappy about division in X3J3

Sweden will vote for anything to get the standard out

UK had held Forum with 150 people attending and had submitted 45 proposals

[Withdrawn: Image of Death from 'The Seventh Seal' with

Fortran 88

inscribed across his cape]

See 1977 to 1990 story in:

https://www.fortranplus.co.uk/app/download/23714308/brian_meeks_fortran_saga.pdf

Bert Buckley



Very assertive chairing of the Paris meeting set WG5 on the path to (relatively) quick resolution of the impasse and final publication three years later.

BRITISH STANDARD

BS EN
21539 : 1992
ISO/IEC 1539 :
1991

Implementation of EN 21539 : 1992

**Information
technology —
Programming
languages —
FORTRAN**

This European Standard EN 21539 : 1992 has the status of a British Standard

Technologies de l'information — Langues de
programmation — FORTRAN

Informationstechnik —
Programmiersprachen — FORTRAN

UDC 681.3.04 : 800.82FORTRAN

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Fortran 82 finally appeared as Fortran 90, standardized by ISO in 1991 and by BSI in 1992

Addendum to the original Berkeley presentation

Unsung work on distribution

Jeanne Martin



Up to 1995 SC22 required that all working documents be distributed on paper

Jeanne personally copied all WG5 documents, after hours, and arranged for their distribution to WG5 members world-wide, several times per year

The online WG5 document archive began in 1995; the WG5 email distribution system started in 1991