# History Of Human Computer Interaction
# A Position Paper By Dave Roberts

## *Abstract*

Dave joined IBM in 1974 after completing his degree in Portsmouth. In his career at IBM he has worked in many areas of computer development and support, including hardware design, systems support and the design of OS/2 Presentation Manager windowing and accessibility features.

Since 1984 he has worked on human-computer interaction and user centred design. This began with lead roles in all versions of IBM's Common User Access guidelines. Dave played a key role in changing the primary mode of interaction for IBM products from green-screen and command line to a GUI.

These videos give an overview of the vision Dave and the team had for interfaces.

Dave now spends his time volunteering in a variety of technology-related ways such as working with Engineering UK on bringing young people into engineering; providing technology such as web sites to local charities, and taking key roles in Rotary International.

## *Experiences*

He was principal architect and manager of the 1992 version of CUA. The desktop design and style defined in CUA has dominated personal computing since 1992. CUA was adopted for Unix as the Motif user interface and for the PC as Windows [TM], first appearing there as the interface to Windows 95.

In 1997 Dave was the lead author for the book "Designing for the User with OVID: Bridging User Interface Design and Software Engineering". Object, View and Interaction Design is a practical method for the use of UML modelling in the construction of the interface to any interactive product. It focuses on the key role of conceptual modelling in the creation of successful interfaces. It uses UML as a *lingua franca* to bring together the skills of a multi-disciplinary design team. OVID provides heuristics to design teams for the collection, analysis and documentation of an interface that meets users' needs.

Since first publication in 1997, the OVID method has evolved to become first, "IBM User Engineering" and more recently "IBM Outside In Design". Until his retirement, Dave continued to work on the development of enhancement of this industry-leading method which brings the use of CASE technology to user interface design. The method is being incorporated into the IBM Rational Unified Process. OVID

For 10 years, Dave also worked as a consultant to many IBM customers, leading the IBM UCD practice in the UK. He has worked directly on a wide range of projects, from web sites to major graphical user interfaces and mentored many more. Customer projects have come from many sectors: central government, local government, defence, intelligence, insurance and banking.

From 2001 to 2004 he was the lead Human Factors consultant and user interface designer for the RAF's UCMP. The UKADGE Capability Maintenance Programme involved the redesign of the RAF air defence command and control ($C^2$) system in the UK.

In the 90s and 2000s Dave was 'Intellect UK' delegate to the British Standards Institute committee for Applied Ergonomics (BSI/PH09) which forms the UK view on usability and accessibility standards. He was a UK expert on the International Standards Organisation committee for IT ergonomics and accessibility (ISO/TC159/SC4/WG6).

## *Collaborations*

Dave was a Visiting Senior Research Fellow in the Faculty of Mathematics and Computing at the Open University. Dave was a collaborator on projects, funded by EPSRC, JISC and other bodies, with universities across the UK. The current projects include a study of the use of Web 2.0 "social software" in education.  Dave's collaborations have led to a large number of publications in the areas of design methods, usability and accessibility.

Dave was also a professional member of the ACM and the ACM Distinguished Speaker program. Dave taught regularly at the University of Birmingham in the 2010s.