A Personal Tribute to Nigel Bevan

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Abstract

As the title says, this is a personal tribute to the unique Nigel Bevan focusing on his role as project editor of the highly influential, original International Standard on usability ISO 9241–Part 11: Usability: Definitions and Concepts published in 1998.

Keywords

Nigel Bevan, usability concepts, usability design, Usability Standards, ISO 9241

Introduction

Although I have known Nigel since his early days working with the visionary Chris Evans at the UK's National Physical Laboratory, most of my contact with him has been through national and international standards. These standards have addressed various aspects of human-computer interaction, and one of Nigel's most significant contributions (during his many years of enthusiastic participation) was as project editor for ISO 9241–Part 11: Usability: Definitions and Concepts published in 1998. This standard has been widely adopted and forms the basis for many further standards.

ISO TC 159 SC4 Ergonomics of Human–System Interaction

Nigel and I shared a passionate belief in the importance of standards, especially international standards, for improving the design of user interfaces. I had been involved since 1983 when I became chairman of the ISO subcommittee (TC159 SC4) responsible for human-system interaction (although it had a different title then). The subcommittee was formed to address a new work item entitled *visual information processing*; although, it was actually about the ergonomics of visual display terminals.

At that time, there was much concern about the potential negative effects for people who were working with visual display terminals (VDTs). The fears included concerns about radiation from the cathode-ray tube based displays to visual, postural, and stress concerns. Repetitive strain injuries were common, and there was no definitive guidance on how to work safely with VDTs. The British Standards Institution (BSI) was therefore keen to develop relevant and usable ergonomics standards, and the group decided to play a key part in what was to become ISO 9241 on ergonomic requirements for office work with visual display terminals. Hence, I was proposed as chair, and the UK provided many experts over the years to play key roles in the development of these standards, including Susan Harker, who was at that initial meeting in Manchester and who has recently succeeded me as chair of ISO TC159 SC4.

Given the urgency of the apparent problems of VDT work, we initially focused on hardware with parts addressing displays, keyboards, workstation, and working environments. We also recognized that even with well-designed technology, the nature of computer-based tasks often resulted in discomfort and other issues especially for users who worked intensively on screens. A further part of the initial six-part series was therefore devoted to the design of computer-based tasks.

Although focusing on hardware probably did speed the process, developing international standards is a slow process, with mandatory review periods typically from 3 to 6 months between steps to allow draft documents to be widely circulated within member bodies. It soon became apparent that many aspects of the computer user interface relate more to software rather than just to hardware.

However, unlike hardware where there can be specific requirements, for example, for a contrast ratio between a screen image and its background, it was clear from the start that many aspects of what might be called the software user interface were not amenable to such simplification. Although there was research on such issues as dialogue techniques, menu design, and so on, the rapidly evolving nature of the user interface meant that there was a need for a different kind of standard.

One of the first of these standards was ISO 9241-11:1998 Usability: Definitions and Concepts, and Nigel was project editor. Nigel had been involved in many other standards over the years and indeed had just seen his revision of ISO 9241-11 published when he had his untimely and fatal accident.

The project team defined usability as "The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use."

This has proved to be a highly influential standard, and this definition has been widely accepted in contexts as divergent as mobile phone and web interfaces to large complex industrial and military systems. To my thinking, this definition demonstrated that usability was not just a

desirable feature of a product or system but was essential if users were to achieve their own and the products' goals. As I have pointed out before, I can imagine a harassed project manager saying that they would have liked to make the new system more usable but that would have delayed delivery. I can see that being an acceptable excuse if the customer viewed usability as simply ease of use. However, if the project manager instead said that the new system was inefficient, not effective as well as being difficult for users, I cannot see that being accepted.

There has also been a widespread misunderstanding about satisfaction. This was a catch all term to cover everything from avoiding discomfort (or even harm) through to a positive experience using the product or system. In 1998, user satisfaction was seen as a fairly weak requirement for a system. But in this century, with so many systems and products being purchased or chosen by their users, a good experience is vital for commercial success.

Addressing misunderstandings and taking account of emerging issues such as user experience were two of the drivers for the revision, which had occupied Nigel in recent years.

Nigel was tireless in working on many standards but I would still cite this one as one of his biggest contributions. He was also prolific when promoting standards though publications, conference papers, and workshops throughout the world.

Nigel as Intrepid Explorer and Traveler

Nigel's travels were legendary as he had an amazing ability to optimize his standards related travel not only to make sure his travel budget allowed him to participate in many standards but also to amass airmiles! As anyone who has ever travelled with Nigel will know, he always took advantage of any travel opportunities to seek out adventures, often involving complex and detailed travel arrangements. I guess it is not surprising that his untimely end should have involved just such an adventure.

However, one of my favorite memories was when the ISO TC159 SC4 committee (which I chaired) was invited to China in 1987. The hosts invited us to participate in a post-meeting tour of such icons as the Great Wall, the Shaolin Temple, and the Terracotta warriors. However, they had not arranged anything for our first evening in Beijing—an oversight Nigel was quick to remedy. With considerable persistence and persuasion (traits well known to his colleagues), Nigel organized an outing to an astonishing acrobatic circus performance. Luckily I was accompanied by my wife and children and I can honestly say it was one of the highlights of the trip. We still talk about it, 40 years on.

Conclusion

The world of ergonomics and usability standards will miss Nigel greatly, and I wish to pass on to his family our deepest condolences from the UK Applied Ergonomics Committee (PH9).

About the Author

Tom Stewart
Mr. Stewart was a member of the HUSAT Research Group in Loughborough University in 1970. In 1981, he was one of the founders of the UX consultancy System Concepts. He has retired as Chairman in 2012 and was active in usability standards as Chair ISO TC159 SC4 Ergonomics of Human-System Interaction (from 1983 to 2017) and still chairs the Applied Ergonomics Committee at BSI. He is the Past President of the Institute of Ergonomics and Human Factors and founding Editor of the *International Journal Behaviour and Information Technology* in 1982. Currently, he is Deputy Chair of the Council for Work and Health and a trustee of the charity the Jubilee Sailing Trust.