Human Computer Interaction: The science of user centred design

Designing the user experience is a crucial component of software product development. The user centered design (UCD) life cycle sits alongside traditional software engineering life cycles and indeed, many of the tasks are complementary. The essential difference is that with UCD, the focus is always on the user experience. Without this insight, products can frustrate users leading to loss of revenue as customers turn elsewhere.

Benefits of UCD
The benefits of UCD are products that delight and engage users. Other bi-products include artefacts such as the personas and scenarios that can be used for creating marketing material. One also expects fewer calls to the help line as products really are fit for purpose!

Consulting
The UCD team offers change management and up-skilling of staff in the form of the following:
- Review of current practice
- Recommendations for change
- Advice on what techniques are appropriate to a given situation
- Training on specific techniques tailored to your current projects

Case studies

**REQUIREMENTS ANALYSIS:**
The UCD team worked with a company to reanalyse its existing scheduling software to discover what functionality was actually being used and by whom. The group determined the key elements of the data and identified both redundant and missing functionality allowing the company to streamline its product and cut out the costs associated with the unused functions.

**PROTOTYPING:**
Via paper prototyping for a company, the UCD team drew on visualisation research to develop novel ways to visualise the many and complex data relationships. These were then realised as a Silverlight functional prototype that could be demonstrated to clients. This ensured that the redevelopment would be time and cost effective.

**USABILITY TESTING:**
The UCD group undertook a heuristic evaluation of a product for a major international bank. The results of the tests enabled the client to make changes to the product and be confident that end users were benefiting from using the software. User testing is a standard part of the UCD team’s research projects and is a valuable component which always turns up unexpected results.
Dr Beryl Plimmer

Dr Plimmer has a PhD in Human Computer Interaction (HCI). She has over 30 years’ experience in the software industry and academia. This experience ranges from systems programming (in the 1970’s); SME software development where cost effective solutions were paramount consideration; HCI research which stretches the boundaries of what is currently possible; and commercial consulting where HCI principles are applied to real-world problems.