



MARKETING INSIGHTS

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User Experience

Where elaborate theory meets brutal reality

From ergonomics to usability

Years ago, everyone struggled to come to grips with ergonomics – both the word and the concept. We know it best as our relationship with computer keyboards and motor cars. In a car, correct ergonomics mean that the little things we use often ‘fall to hand’, that we don’t have to hunt around for this lever or that switch. These days, car makers have standardised on the positions of things like indicator stalks and light switches.

As our acceptance of tech tools and gadgets grew, feature overload became the norm and usability became the issue. The average human is hard pushed to use 10% of the functions served up by today’s electronic gadgets. The same goes for PC software. Usability Engineering labs have sprung up to study the finer aspects of Human-Computer Interaction. Some labs drag people off the street and sit them in front of PCs running prototype software, to help their makers design better interfaces.

Marketers are at last getting the message: features that are too hard to use are of little use to buyers. What matters most to them is that gadgets are easy to use and work reliably, and that they do the job they were bought for. And yet, despite all the principles that have been established for good design and all the papers written on usability, it’s still a hit-and-miss affair.

Coffee grounds

Take espresso machines; I have both 2 very different units— a Krups K2 (right) and a Breville 800 series (below). The Krups has many features but usability is not one of them. It takes ages to do anything; mostly it sits there flashing lights and making noises like a constipated duck.



Small may be beautiful but not when it comes to the Krups: the rack on the top is too small to hold cups, the drip tray at the bottom is too small to hold more than a few drips, and the water reservoir at the back runs dry after 3 or 4 cups.

The Breville looks a lot slicker, works a lot faster and has ample storage for cups, water and drips. It wins hands-down in the usability stakes because it’s a far superior design.

What about the flavour?

Both of these make acceptable coffee. A friend’s Saeco, on the other hand, makes superb coffee. Most people don’t know the difference; only the fastidious, the obsessive or the pros care deeply about the quality of the end product. The flavour that most people treasure is the user experience, that is the emotional connection they form with their gadgets. People will say things like: I love my ... It means they love the look of it, they love using it, handling it, having it close to them – owning it.

User experience is a more illusive creature than usability. ISO 13407 - the International Standard for Human Centred Design – does its best to define it as ‘all aspects of the user’s experience when interacting with the product, service,

environment or facility' and adds that the experience 'is a consequence of the presentation, functionality, system performance, interactive behaviour, and assistive capabilities of the interactive system.'

For another reality check, let's look at consumer cameras. Canon's IXUS 960 IS is one of Canon's top pocket models. It comes tucked in a slick titanium case and boasts a huge 12 megapixel sensor. It also boasts a price to match.



It's the most infuriating camera I've ever used because:

- layout of controls is neither intuitive nor logical
- it doesn't fit well in the hand
- it's slow to start and slow to shoot
- the viewfinder is a sad afterthought
- it's virtually useless for anything but point-and-shooting on Auto despite its 12 megapixels, challenging compositions end up fuzzy
- Colours are bland in neutral mode and oversaturated in vibrant mode.

Nikon's D40 entry-level DSLR gets everything right:

- it fits in the hand so well you forget it's there
- its controls are an object lesson in ergonomics
- It starts in a heartbeat and shoots in an instant
- despite the extra settings, it takes far less time to come to grips with than the Canon
- the viewfinder is a pleasure to look through menus are easy to follow, and are supported by pictures and helpful comments.
- despite its 6 megapixels, 75 x 50cm prints are impressive and the colours as real as they get



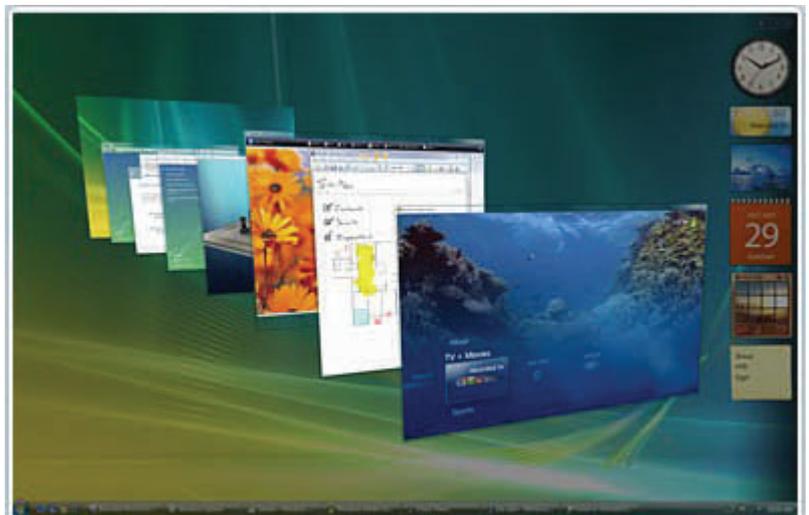
The Nikon has been praised for setting the standard for user-friendly design among DSLRs, and has clawed back a lot of the ground it lost to Canon in the early years of Digital SLR photography.

The Canon IXUS 960IS, by contrast, is the Krups of cameras. Not a fair comparison? Okay, the Canon is a pocket digicam but there's only a couple of hundred dollars between these two. The real difference is this: I love using my Nikon D40 and go out of my way to take pictures with it. That's a sure sign that the camera delivers a great user experience.

Computer software

Software makers tend to take user experience seriously yet often miss the mark. Windows XP is high on usability but few would claim that it provides a great user experience.

An operating system that can't install updates without forcing you to reboot your PC is a pain. A file system that needs defragging is another pain. An operating system that crashes for no reason is a real pain. OSX Leopard and Linux users are chuckling with delight at this point, but their platforms aren't perfect either – see <http://www.technoledge.com.au/pdfs/desktop-shootout1.pdf> .



The Microsoft standard

Microsoft had all the means and resources to make Vista a great user experience but lost the plot. How did that ludicrous UAC feature slipped through? And what does all that extra baggage actually do?

Behind the pretty new face, Vista's changes are superficial and the additional features a mixed bag. What really kills the user experience is its sluggish performance. Vista is like a pretty young girl you meet at a ball who can't dance. We ran a piece on our site offering some dancing lessons - <http://www.technoledge.com.au/pdfs/how-to-make-vista-fly.pdf> . We shared this piece with a friendly PC tech site, where it still tops the how-to chart with 85,000 hits: <http://www.techsupportalert.com/tutorials>

Microsoft's response to the bad Vista press was mostly indignation, a reaction only Microsoft can afford. 'Frankly, the world wasn't 100 percent ready for Windows Vista,' was how one MS exec put it. The mammoth launch campaign soon ran out of steam, and a second advertising blitz - 100 reasons - failed to get traction. Now Microsoft turned around and blamed the user : <http://windowshelp.microsoft.com/Windows/en-US/help/83EC0FFE-EE04-4D53-8B87-25D1F05C954E1033.msp>

'That state-of-the-art PC you bought last year might not feel like such a screamer after you install a dozen programs, load it with antispymware and antivirus tools, and download untold amounts of junk from the Internet ... If you're the type of computer user who likes to keep eight programs and a dozen browser windows open at once—all while instant messaging your friends—don't be surprised if your PC bogs down.'

At times, even MS's biggest shareholder complains about the company - see this famous memo fired off by Bill Gates after trying to download software from one of his own sites <http://blog.seattlepi.nwsourc.com/microsoft/archives/141821.asp> . It's five years old but little has changed since Bill complained about 'Windows usability going backwards.'

The Apple standard

Apple has built whole brands on providing a better, fresher user experience, and its Human Interface Group has a long and glorious history. It's safe to assume that Microsoft has one of those too but that raises the obvious question: how did MS get Vista so wrong that even longstanding, loyal acolytes bagged it?

Apple worked out decades ago how to make great features accessible to simple users. The first Mac with its mouse and drag-and-drop simplicity was a huge leap forward, and the current iPhone shows that Apple still understands user experience better than its competitors.

Apple also understands what makes stand-out industrial art, that is gadgets to be acquired and admired and used for the sheer joy of it. At times, Apple has taken art too far and sacrificed function to form. The iPhone's battery isn't user-replaceable. The MacBook AIR repeats the omission and also leaves out an optical disk drive, ethernet port, firewire port and all but one USB port.

Perhaps Apple understands that style is more important to some of its customers than function. Apple certainly understands that people are prepared to pay a hefty premium for slick design, yet even Apple can slip up badly - on the next page is an unadulterated snapshot taken on a crisp 22in LCD screen, rendered in the original size.



Apple has the world's most advanced operating system, Mac OS X, which combines a powerful core foundation with a compelling user interface called Aqua. With advanced features and an aesthetically refined use of color, transparency, and animation, Mac OS X makes computing even easier for new users, while providing the productivity that professional users have come to expect of the Macintosh. The user interface features, behaviors, and appearances deliver a well-organized and cohesive user experience available to all applications developed for Mac OS X.

It's from a website headed **Introduction to Apple Human Interface Guidelines** http://developer.apple.com/documentation/UserExperience/Conceptual/AppleHIGuidelines/XHIGIntro/chapter_1_section_1.html . And it demonstrates that a careless choice of typeface can utterly destroy the user experience.

Open Source software

Developed by communities of talented people, open source software tends to be more varied in usability and user experience. There is more variety and less control, there are more roads and fewer control points. Linux is a great example, an operating system that offers at least 500 different flavours (distributions) but also some genuine advantages when compared to Microsoft or Apple. The key ones are outlined in this piece we wrote some time back http://www.technoledge.com.au/pdfs/linux_desktop2.pdf

Most of the reasons are still valid but Linux has made little progress since we wrote that piece. Mark Shuttleworth, the driving force behind Ubuntu, makes no bones about where he wants to take the operating system: In a recent blog post, he wrote about his goal of "delivering a user experience that can compete with Apple in two years" <http://www.markshuttleworth.com/archives/162> .

And he has no illusions about how tough that might be, given the free spirits who've developed some 500 versions of Linux and a dozen Windows-like user interfaces to go with them. We wish Mark well.



Everyday programs

Anti-virus programs are great examples of software that every PC needs and every user hates. Symantec held the lion's share of this market far too long and, for just as long, Norton AV reflected it, making life so miserable for users that dozens of websites like this one sprang up to let them vent their anger - <http://www.computergripes.com/nortonantivirus2005.html>

Competition from McAfee, Trend Micro and other makers forced Symantec to improve the Norton user experience in the last couple of years. When we tested 2008 Internet Security suites <http://www.technoledge.com.au/pdfs/2008-security-suites1.pdf> , we found Norton's product much improved but still struck enough bad manners (long install with big updates and restarts) to put us off.

This year, McAfee became the big baddie in the AV patch after users complained that the company renewed their licences and billed their credit cards without asking them for approval. McAfee pointed out that this auto-renewal clause was buried in its EULA, to which customers had agreed. That didn't improve the user experience one bit.

ESET's NOD32 has long been our favourite AV software for its advanced heuristics, light weight and easy manners, but its interface used to be a disaster. A complete redesign has pushed ESET's NOD32 and Smart Security to the front in terms of user experience. Installing or uninstalling ESS couldn't be simpler or faster, and setting it up is a doddle.



The Web

Web browsers are a good example of a program anyone can use without special training, at least at a basic level. The internet has been credited with giving ease of use a big push forward, and the invention of the web browser was the key to its wide acceptance. The internet existed for years before most of us saw it, but it was a command line environment limited to Defence personnel and academics.

The big e-commerce sites were the first to learn the hard lessons of usability. The story goes that Dell, back in 1999, did a major overhaul of its website. Most changes were simple ones like reducing the number of clicks necessary to make a purchase, or changing colours, typefaces and font sizes to make text more readable. Dell's online sales rose from \$1 million a day in September 1998 to \$34 million a day in March 2000.

This is how Google became such a successful search engine: they recognized that all of the existing search engines offered a poor user experience, and improved the entire workflow, from opening the search page faster with less clutter all the way through to displaying meaningful, accurate results. It was not that other search engines were not usable - every search engine had about the same syntax for advanced searches, basic search all worked the same, and everyone could find the box to type in the query. It was that the overall user experience was miserable.

E-commerce sites and browsers may have come of age but many other websites still have a way to go when it comes to user experience. We provide a service to clients we call a **Website Obstacle Check**, which highlights issues visitors may have with websites <http://www.technoledge.com.au/pdfs/webcheck-resource.pdf>.

The most common obstacles are:

- Off-putting or befuddled look and feel (colours, symbols, layout etc)
- Key messages that aren't clear, making it hard to tell what the site is about
- Too many words on pages in a tiny type font, making the words too hard to read
- Colour choices that have the same effect
- Pages take too long to load (still far too common)
- Navigation is difficult, and things aren't where you expect to find them
- Transactions take too long to conclude,
- too much information is demanded and not enough is provided

Summing up

The user experience is so much more than usability; it starts the moment the customer first hears about your product, carries through to the purchase process, the customer support, the installation and configuration, and all of the way through no longer using the product.

For most products, the primary portion of the user experience is how it addresses their day-to-day why based goals. Does it help them do their job more effectively than other products or what they previously were doing? And this is why it is so important to code towards the user's why and not just the how. Usability focuses on making sure that the how is flawless; user experience is about ensuring a perfect why.

Further reading:

Everything you wanted to know about usability:
<http://en.wikipedia.org/wiki/Usability>

US government rules for website design
<http://www.usability.gov/pdfs/guidelines.html>

simple guidelines for usability testing
<http://www.pantos.org/atw/35317.html>

Some of the things that make MACs so appealing to users:
<http://www.smashingmagazine.com/2008/08/12/top-10-usability-highs-of-the-mac-os/>

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