

Electronic Systems & Power

Finding success by design

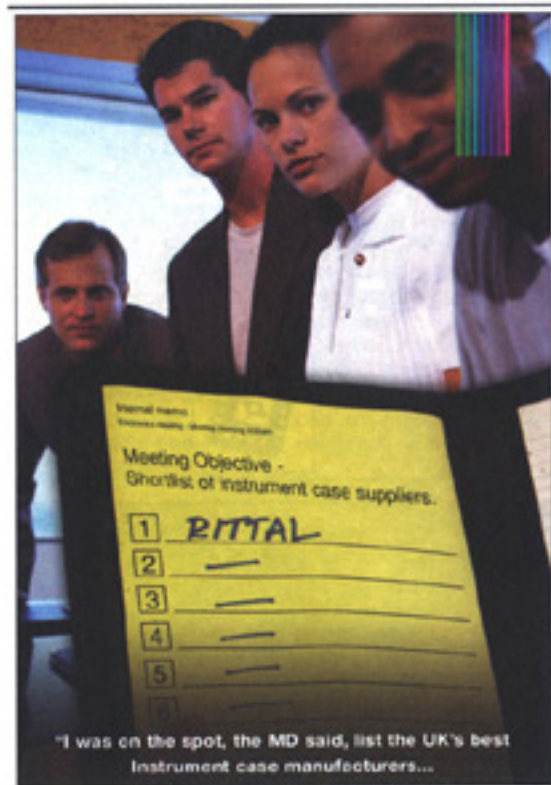
Clever design can make your product stand out from the crowd and bring huge benefits, says **Bruce Hutchinson**

It is not just the latest in MP3 players or mobile phones that need good design; even companies producing industrial products see it as a way of standing out from the crowd.

But if you are new to design, how do you ensure

you are getting something that contributes to the success of the product and not just an overpriced pretty box?

The best design can do so much more than make something look appealing. It can make products more effective, add value and



After consideration, the list grew shorter & shorter"



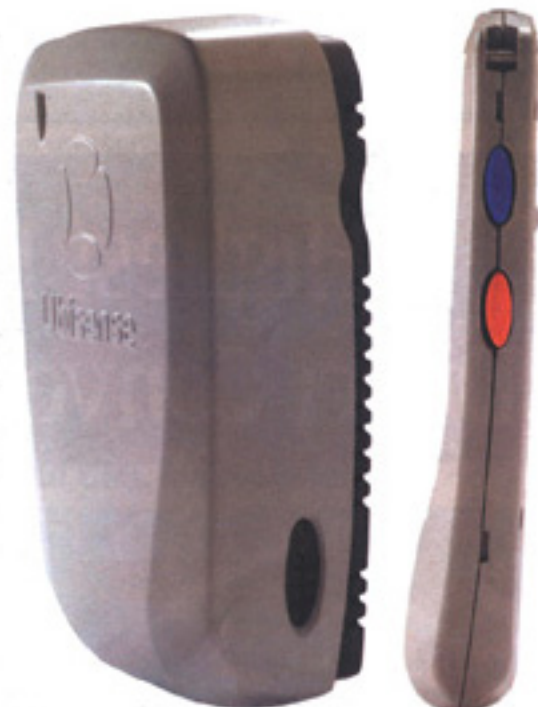
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UbiSense's sensor product before and after the design house was involved.



even save money. Using a design house gives companies the opportunity to look at their products differently, to look at using new materials and processes, and to link together the technical engineering side of the company with sales and marketing. The wrong design can be costly, not right for the target audience and impractical to produce and use.

So how do you ensure your product and company benefit from design?

Well, it comes down to the brief which is the key to whether a design works or not.

But it is not just down to the client to supply a brief. Some design companies, like DesignEdge, give guidelines to "new-to-design" clients for putting together a brief, covering timescales and technical and marketing issues. In fact if needed the brief can be produced for the client to sign off. Not a single pencil mark of the design is made until both agency and client are happy with the brief.

Many companies new-to-design are wary of the whole process, and often see it as an unnecessary expense. They can look through design company

portfolios, but find it hard to relate what they see to their own products. This suspicion is something many design houses feel they have to overcome to be accepted within the engineering fraternity.

Previously designers often felt they were dismissed as 'felt tip fairies' or in other derogatory terms by engineers who thought they were only there to produce designs that would be far too complicated and costly to manufacture. One way to overcome this is to look for designers who understand the particular sector and have the technical, as well as the design, skills to make the right choices for the design and manufacture of the product.

One way to overcome customers' suspicions is by making sure expectations are surpassed. Even with the most rigid of briefs there is room to innovate while still remaining within the brief's restrictions.

DesignEdge usually shows three designs: one safe, one in the middle that gives the product an up-to-date feel, and one really radical design. The advantage of this is customers often feel braver about choosing a more radical

design when they can see what it will actually look like and achieve.

Initial concept sketches are followed up by 3D CAD, photo-realistic visuals or models that bring some reality to the design. Clients are offered technical support right through development along with help choosing the right suppliers if required.

The difference that design can make to a product is illustrated in a project undertaken by DesignEdge for UbiSense - a sensor using ultra-wideband technology to locate people and objects to an accuracy of 15cm using a tag system.

The product was developed as a means of making buildings more efficient rather than for tracking what people were doing, but it became obvious that the company would have to overcome this perception.

"An earlier off-the-shelf design for the tag that people wore was big and bulky and, even if people didn't go as far as being threatened by it, they saw it as an inconvenience," says UbiSense founder Paul Webster. "We wanted a design that would encourage user acceptance, with people happy to wear the

tags for the benefits they would bring, not because they were told to."

For this reason the next design had to be as small as possible, friendly looking and inoffensive.

DesignEdge went for softer tapered edges that fell away visually and thinned the plastic right down in places, keeping the bulk in the middle. It is almost as small as the electronics it surrounds and half the weight of the previous version and can be worn or clipped onto a valuable item.

And what about user reaction? "Everyone who sees the tags wants to run their hands over the shape, because it looks so soft with no hard edges," says Webster. "It also has the feel of things more familiar to people than a tag, such as the most up-to-the-minute mobile phones. We're now planning to produce funky coloured and even transparent versions."

So whether it is a tagging system or a mobile phone, the right design can make all the difference to success or failure.

Bruce Hutchinson is founder of DesignEdge, a Cambridge-based industrial design and engineering company. www.designedge.co.uk