IAUD
Newsletter from London

Dear IAUD members

Here is a short newsletter to introduce some important recent developments in Universal Design, as seen from a European perspective. I hope to update this on a regular basis in future, and will also seek opportunities to promote the work of IAUD to my European colleagues.

Roger Coleman, London, 7 March 2005

Universal Design gains momentum

Universal Design is undergoing an important transformation, from an aspiration for disabled people, to a reality in the way companies are adopting the idea, and in new products and services in the market place.

There is also good evidence that we are entering a new phase, where Universal Design will deliver profitability, increased market share, and real competitive advantage in local and global markets.

In support of this I want to share with IAUD membership some stories from the UK, Europe and the US. But in no sense do I wish to imply that Japan might be trailing behind. Quite the reverse, the establishment of IAUD has sent a message to the rest of the world about the importance of universal design, and the IAUD presentations at the December 2004 conference in Rio de Janeiro demonstrated that significant and rapid progress is taking place in Japan, and that there is real commitment and leadership, especially in implementation, coming from Japanese companies.

In my view we are moving towards a synthesis of ability-friendly design, with emotional and aesthetic qualities. The result will be what I would call '*design for delight*': design that seeks to deliver a high quality of user experience and satisfaction to people of all ages and abilities. The goal is a combination of intuitive usability with aesthetics and other qualities that delight and engage the user, offering enhanced life quality and fulfilment. Social and technological developments are continually raising consumer expectations, but companies that stay focused on that goal will build strong bonds with their customers and reap the benefit. Those that do not will be punished in the marketplace.

The Internet is giving consumers greater access to information about products and services and the companies behind them. We are able to compare and contrast, not just price and features, but also the opinions of other consumers, in the form of reviews on websites like Amazon.com, and comments on bulletin boards, blogs and newsgroups.

In the future, it will be networks of satisfied and informed customers that determine the success or failure of products and brands in the marketplace. This trend will favour companies that have adopted universal design and work to ensure that their consumer offer includes and embraces the maximum number of people, and brings delight to all its users.

News stories: USA

Usability a major factor in IT products

In 2003 and 2004, Software giant Microsoft commissioned a representative survey of the range of abilities across the working age population and its likely impact on computer technology and usage. The goal was to identify the range of physical and cognitive abilities among working age adults and current computer users in the US, and also to identify the types of difficulties and impairments that limit computer use, their range and degree of severity, and the number of people who could benefit from accessible technology.

The survey was carried out in 2003, by respected consultancy Forrester Research Inc., and when the results were analysed the 15,000 people sampled delivered a clear and very powerful message: 57% of them could benefit from accessibility features that are often buried within the operating system, rather than being made evident to the mainstream user. In other words, software developed for what Microsoft regarded as a minority of the population – disabled and older users – offers benefits to the majority.

The second phase of the research was a follow-up study conducted in 2004, which examined the use of computers and accessible technology among those identified in phase 1 as being likely or very likely to benefit from accessible technology. The report concludes with a forecast of growth in the demand for accessible technology, and an overview of the opportunities for the IT industry, in particular by making this technology easy to discover and use.

The impact of this research on Microsoft has been significant, pushing accessibility high up the agenda for management and software developers alike. What we see here is a potential win-win coming from the convergence of usability and delight. Enhanced usability not only means that companies with legal obligations to employ disabled people can provide computing equipment that meets their needs, and at little or no extra cost; it also means that as the same equipment can be used by all, no stigma is attached, and disabled employees are not necessarily restricted to a special, adapted environment. But beyond that, it means that the majority of workers are likely to find their tasks easier and more enjoyable.

Research initiated by electronics giant Philips in 2004 very much confirms the Microsoft view. Philips is active in three interlocking business sectors: healthcare, lifestyle and enabling technology. The research was intended to calibrate the convergence of these three sectors through a web-based on-line survey of a smaller, but representative sample [of the US population] of 1,501 US Internet users aged from 18 to 75+, undertaken in July 2004. Though primarily examining attitudes towards healthcare and well being, the research is also revealing about attitudes towards technology. For example, two out of three respondents [74% of females and 53% of males] reported having lost interest in a technology product because it seemed "too complex to set up or operate". While only 13% [8% females males and 19% males] believed that in general, "technology products are easy to use".

Clearly usability is a major factor in purchase decisions regarding technology products, but the importance for universal design is that understanding and designing for the more marginal or difficult cases not only drives innovation, it also leads to significant benefits for the majority of users. Furthermore, technology products that prove difficult to use after purchase can only result in dissatisfied customers, who will share that dissatisfaction with other consumers over the Internet and cause real damage to brands.

References & links:
www.microsoft.com/enable/research/phase2
www.microsoft.com/enable/research/phase1
The Philips Index: calibrating the convergence of healthcare, lifestyle and technology. www.usa. philips.com/Assets/Downloadablefile/603043_USindex_FINAL-13091.pdf

News stories: UK

Sky TV

UK satellite broadcaster Sky has worked hard to make its services accessible to all, and is deeply committed to inclusive or universal design. Driven initially by legislation, in the form of the UK 1995 Disability Discrimination Act – key elements of which became fully enforceable in October 2004 – Sky realised that by actively catering for disabled users it could attract additional subscribers. Enough to make the provision of enhanced content cost-neutral and eventually profitable.

Sky offers the one, inclusively designed set-top box, suitable for all subscribers, along with a range of integrated accessibility services, and consultation with disabled people. Its disability strategy is directed at linking the needs of business to the needs of disabled people, and delivering social and economic benefits through an inclusive offer in terms of services and programming. Feedback from disabled consumers helped shape this agenda by identifying seven points for change. As a result, Sky was the first UK broadcaster to make audio description available and is setting a lead that others must follow if they are to keep market share.

Not only is this building the Sky brand in terms of social inclusiveness and innovation, it is also creating networks of delighted users among the disabled community who are promoting Sky to their friends and family. In these ways, Sky is turning what was originally seen as a legal obligation and a cost on the business into an income stream that is directly and indirectly growing its consumer base and market share, and strengthening the Sky brand.

A central and winning plank is to embed usability features in its core programming. Disabled users do not need special equipment to access these services, and so wherever they are, at friends, in a hotel, at home, they can enjoy the same accessibility. This adds delight and completes a virtuous circle that is driving up Sky's subscriber base.

DTI-funded awareness programme

Another connection is the link between Sky and leading UK charity Scope. Scope has worked with Sky on developing accessible remote controls that will work better for everybody. Most people find current designs difficult to use, in particular older people, and by developing a truly inclusive remote, Sky looks to improve the viewer experience for all its subscribers. Again, the intention is to have just one, universal, remote control that all Sky subscribers can use, wherever they are.

Being involved in this project is important to Scope. As a it is committed to working for the integration of disabled people and in particular, those with Cerebral Palsy, into mainstream life. At a '*Disability Summit*' of UK charities and voluntary sector bodies, organisations organised by Scope, there was agreement that Universal or Inclusive Design is key to the integration of disabled people into the mainstream of life and work in the UK. This convinced Scope to place Universal Design at the heart of its activities, and to strive to interest major companies and encourage them to develop universal products and services. Initially Scope was thinking in terms of establishing a 'Centre for Inclusive Technology and Design', but this soon became a network of interested organisations, including the Helen Hamlyn Research Centre, with the skills and expertise to support a Scope initiative.

This idea was taken to the UK Department of Trade and Industry (DTI), which has funded a £150,000 in-depth questionnaire study into levels of awareness in UK companies which seeks to prioritise future action to ensure the uptake of Universal / Inclusive Design in the UK. Through additional pilot workshops, a further goal is to develop a trial training package for industry and refine that into an effective programme that can be spearheaded by Scope, along with other age and disability organisations.

The response from industry has been impressive, and I will ensure that IAUD has access to the findings as soon as they are available.

Case study: B&Q

Universal design drives innovation

The B&Q story has many similarities with the Sky story. Not surprising, as Kay Allen, currently Head of Diversity at Sky, previously held the same post at B&Q. As major UK home improvement retailer, and number three worldwide, B&Q dominates what is known in the UK as the do-it-yourself or DIY market. The company had an early interest in the older consumer, and also found benefits in employing older people who it found to be more flexible, reliable and loyal than its younger work force. Older sales staff were also welcomed by older customers and B&Q found this helped build bonds with local communities. From this base of awareness, the company was quick to respond to the Disability Discrimination Act, and put in place a diversity strategy that aimed to make stores accessible to both older and disabled customers and older and disabled employees.

Some years ago I approached B&Q to discuss the results of some research that revealed a significant and continuing interest in DIY among the 50+ population, compared with younger people, but one that tailed off after 65. My suggestion was that there could be significant commercial opportunities for ease-of-use DIY tools and equipment, and that these could open up further possibilities in terms of bathroom and kitchen products that would appeal to all but work well for older people. This resulted in a now long-standing collaboration between B&Q and the Helen Hamlyn Research Centre.

B&Q had not really used design or employed designers before, in particular not for the design of products. Its business model was based on sourcing products, largely from Asia, and in particular China, that could be sold on price advantage. An initial audit of power tools identified significant usability problems, and resulted in a guide for product buyers to help them identify and ask for ease-of-use features. This was followed by research with older users, including

Case study: B&Q

older women and retired tradesmen with long experience of using hand and power tools, and also with young women.

Matt White, the Helen Hamlyn Research Associate went on to develop designs for four new or improved products, on which five patents were secured. Two of these – a lightweight palm sander with a hand-strap for easy use, and lightweight electric screwdriver – were chosen for full development, and launched on the market in time for Xmas 2002. Matt White paid particular attention to the styling and packaging of the products to ensure that they were perceived as having real design value as well as being lightweight and easy to use. The products have sold well, and been twice voted as in the top ten power tools on the UK market.

INCLUSIVE DESIGN GUIDELINES
TOWARDS 'SINGLE PLANET' HOME IMPROVEMENT

KINGFISHER   WITH SUPPORT FROM B&Q

Matt White continues to work as a designer for B&Q, and a second Research Associate project investigated garden power tools, a big potential market, especially for older people, who are often keen gardeners. Research Associate Robert Brown recruited a group of older gardeners to test products, which they took home, assembled and used in their gardens. Again, many problems emerged, from assembly instructions and manuals to usability. The end result was a further series of innovative designs, two of which were taken forward to production.

The important factor in this story is that B&Q came to appreciate the power and importance of design through these two universal design collaborations. As a result, the company could see very clearly the link between more inclusive design, real innovation, bigger profits and brand strength through customer satisfaction. This was a significant journey for the company, but did not stop here. First, the Helen Hamlyn Research Centre hosted an innovation day for B&Q senior managers, which has led to a better understanding of design within the company, and second. Research Associate Robert Brown was commissioned to produce guidelines on Universal / Inclusive Design and Sustainable Design, not just for B&Q, but for the whole of the Kingfisher Group, which owns B&Q.
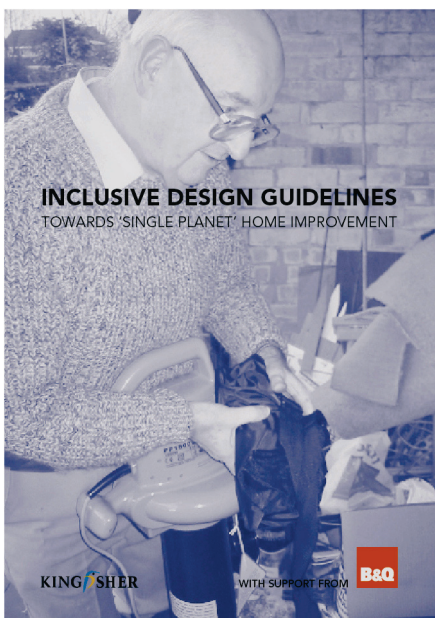
News stories: UK

New British Standard

The DTI-funded initiative (page 3) is timely because it coincides with the publication of a new British Standard within the BS7000 Design Management series. BS7000-6 is a comprehensive guide to managing Inclusive or Universal Design within all enterprises, public sector and not-for-profit organisations. The standard provides a framework by which executives – owner-managers, board directors and principal officers down to junior executives – as well as design practitioners can understand and respond to the needs of diverse users without stigma.

The standard concentrates on the management, not the practice of Universal / Inclusive Design. The two main sections contain guidance at the organisation and project levels respectively. The standard highlights the importance of conferring with target customers to ensure approaches and solutions are appropriate, emphasis is placed on ensuring close coordination during the development process so all disciplines contribute effectively at all stages, before and after introduction to market.

The section on managing Universal / Inclusive Design at the project level is taken up largely by figures and diagrams on all prime stages of Universal / Inclusive Design projects. Each includes details of the stage aims, Universal Design tasks to be undertaken, tools and techniques that facilitate work, key outputs, and the basis on which a project might progress to the next stage.

Two extensive annexes include further evidence to reinforce the case for adopting a professional approach to Universal / Inclusive Design. One summarises trends in population, society and legislation, providing some insights into the diversity of society, different kinds of impairments and the implications for work and public environments. The other outlines the tools and techniques that facilitate work at different project stages, some developed exclusively for Universal / Inclusive Design work.

I was a member of the drafting panel, and have put much effort into ensuring that supporting Internet resources are available to support industry, design and education in implementing Universal / Inclusive Design.

My own 'knowledge cell' on Universal / Inclusive Design can be found on the UK Design Council's website, and contains an extensive bibliography and list of websites. On the first page there are links to the key resources mentioned above, and on the UK Design Council home page there is a story about the standard, which contains a link to the homepage of the Scope CITD survey. There are also links and much information on the Helen Hamlyn Research Centre website. Through these URLs you can access a significant amount of information and find links to other key sites around the world. There is even a short article on IAUD in my knowledge cell, which I hope to expand on shortly.

References & links:

My knowledge cell is at
www.designcouncil.org.uk/inclusivedesign
The Helen Hamlyn Research Centre URL is
www.hhrc.rca.ac.uk
www.bsi-global.com

News stories: UK

Research agenda

My colleague, Professor John Clarkson, Director of the Engineering Design Centre at the University of Cambridge, has done significant work on developing the statistical basis for the concept of 'design exclusion', while my team at the Helen Hamlyn Research Centre has worked on demonstration projects to show that we can counter design exclusion through Universal / Inclusive Design strategies and practices. In my view design exclusion is a crucial concept. It describes how people are excluded by specific design features.

Understanding, addressing and correcting this exclusion can lead to far more accessible products and services, and of course, bigger markets. What Professor Clarkson and his team have done is to begin to attach numbers – proportions of the population – to design factors. In this way we can determine accurately, how many people might be excluded from using or accessing a product or service as a result of poor design features. The power in this concept is that it can be expressed numerically, and can thus be related to potential market share.

In this way we can articulate what the Microsoft study pointed to: that increasing accessibility for users increases accessibility to market sectors previously excluded. In other words, accessibility for end users equals market access for manufacturers and service providers. Accessibility makes good market sense, just as inclusivity makes good design sense.

The problem Professor Clarkson and his team have had to grapple with is that existing data sets are incomplete, not fully compatible and do not quantify some important factors. What we need are more representative surveys, like the Microsoft and Philips data, that specifically allow us to measure functional capability across the population and relate this to the ability to perform a range of tasks and activities. Given that data set, we would be far more able to determine numerically the impact of design decisions with regard to the included and exclude population. In other words, the market relationship between potential sales and actual accessibility would become transparent. At that point we can stop campaigning and get on with implementation.

Professor Clarkson is working on the design of an appropriate, representative survey for the UK. That methodology will be fully transferable to other populations The cost of a fully representative survey would be in the region of £1-2 million, and at present no UK research funding body is in a position to support such a study, but Professor Clarkson and myself have made representation to the UK House of Lords Inquiry into Ageing Research on the need for data relating capability to activity and representative of whole UK population. Hopefully, a way will be found to conduct such a survey in the UK.

If we had the data much could be generalised from it, but other studies using the same methodology and generating genuinely comparable data would begin to give us the whole world picture, which is essential in the context of global markets. There is an opportunity here for Japan to take a lead if such a study could be initiated. The country that takes the first step will be ahead of and, I hope, set the standard for others to follow. I know Professor Clarkson would be very happy to support an initiative in Japan, as would I, because any such study would advance knowledge in an important and timely way.

News stories: Scandinavia

In Europe

Universal Design is moving up the agenda in Scandinavia in the context of the Scandinavian Year of Design 2005. In Scandinavia the term 'Design for All' is use rather than Universal Design, but the intention is very similar. The opening event of the year was a conference on Design for All held in Stockholm, on January 26, at the new premises of Konstfack, the Swedish design university. I was asked to make a keynote presentation about collaboration with industry, which I did, along with Maria Benktzon of Ergonomi Design Gruppen, who gave a superb presentation on the development of Design for All in Sweden and the work of Ergonomi, which she has led over the years.

I was impressed by the quality of the delegates and the speakers. The conference was opened and closed by Swedish Government ministers, one with specific responsibility for health and disability, the other for consumer affairs. Other speakers included leading representatives of the design and design management community.

What was clear from Maria Benktzon's presentation, was that Sweden made very early progress in this field, due to the social security and welfare system in place in the 60s and 70s, and of course the very talented group of people at Ergonomi. As a result, it was Maria's work that defined the early potential of Design for All, and demonstrated that the quality of assistive products could be very significantly enhanced through good design. Not only that, Maria's work with disabled and arthritic people inspired her to develop new methods of researching and understanding ergonomic and design factors that could be transferred to mainstream design for professional and consumer markets. This mapped out the potential of Universal Design to drive innovation in design methods and mainstream markets.

For a variety of reasons, Sweden as a nation failed to capitalise on this early lead, and so now feels it has to catch up with other countries. The very clear message from the conference was that this is now the intention. I think there is an awareness of a lost opportunity and the need to catch up is now high on the agenda for government, and for the disability organisations. Not just in Sweden, but in the other Scandinavian countries. This is demonstrated by other events planned for later in the year.

A major design event, the World Design Congress (ERA 05), will take place between 21-29 September, organised by Scandinavian design bodies in collaboration with ICSID, IFI and Icograda. Copenhagen will be the main venue, with pre-congresses in Oslo, Malmø, and Helsinki. The pre-congress in Oslo, 22-24 September, will be on the theme 'Design without Borders', and will include a one-day seminar on Design for All, at which I have been asked to give a keynote. The event will target the business and design communities and is intended, according to Jannicke Høllen of the Norwegian Design Council, 'to create awareness among business leaders and designers in regard to design for all as a necessary tool for an inclusive society and also commercial success in the future.'

I am also invited to speak at the main conference in Copenhagen, September 27, in the session on 'Shifts in Society: design and demographic trends', where the focus will be on ageing populations and Universal Design. All the signs are that Universal Design is becoming an important issue in Scandinavia, and I know from long-standing collaborations with colleagues in Finland that this has been an important subject there. My feeling is that we are approaching a critical mass in Scandinavia and that we will soon start to see major companies buying in to Universal Design.

I should remind IAUD members, that Ergonomi – where Maria Benktzon is a senior designer and researcher – has set up a small office in Tokyo and is looking to work with Japanese companies.

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Into production

Work at the Helen hamlyn Research Centre, based at the Royal College of Art, London, is increasingly focused on taking good design projects into production. As part of this process we are developing a core of young, universal or inclusive designers with the right skills and expertise. For the past five years we have been collaborating with businesses and professional design companies and are now starting to see some promising results. A further development here is the establishment of InnovationRCA, a sister organisation to the research centre, with the capability to protect intellectual property and enter into contracts with manufacturers and other institutions. Some recent successes are shown on this page.
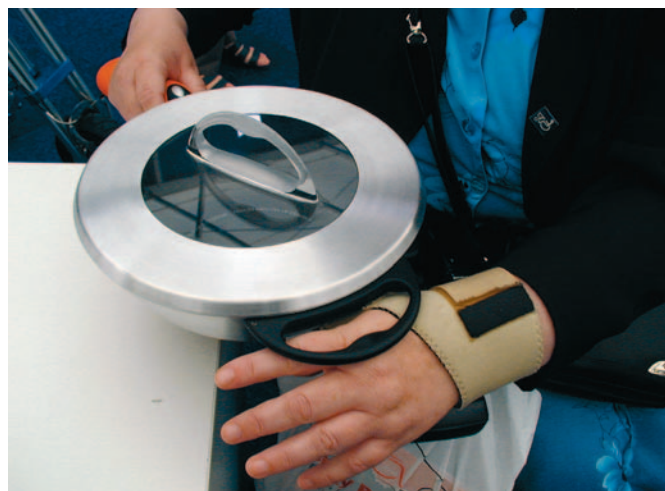
Easy grip frying pan by Factory Design, under development for a UK company

www.factorydesign.co.uk

landscaped tableware by RCA graduate Lisa-Dionne Morris   www.landscapedtableware.com

Pill Popper by RCA graduate Hugo Glover, helps people access blister packs
www.innovation.rca.ac.uk/NE.html

Read Regular, a font for dyslexics, by HHRC Research Associate Natascha Frensch   www.readregular.com

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Where next: challenges and opportunities

Rio de Janeiro: Japan shows the way

I was deeply impressed by the progress made by IAUD members, as demonstrated by the special session at the conference in Rio de Janeiro. In particular, the enthusiasm of young managers and designers shone through, and their commitment to integrating Universal Design within their companies was uplifting. Whereas in Japan, it is clear that a new generation of highly motivated young people is coming through. That is a very welcome sign, and represents a big step forward.

I did feel that the American experience, as presented at the conference appeared to be running out of steam a little, although the research undertaken by Microsoft and Philips presents a very different picture. In the US, the emphasis is still primarily on disability and access, rather than new product development and innovation, which is where I think the real challenges lie.

The UK experience has proved that working with extreme users leads to innovation. But in the UK, as the DTI-funded awareness programme demonstrates, although there is real interest in Universal Design, there is still a low level of uptake. We now have a British Standard, but we lack the commercial awareness in industry and business that is evident in Japan, and in that respect we are trailing.

In Europe, although we have a history of groundbreaking work in product design from people like Maria Benktzon and companies like Ergonomi, there is still a tendency to equate Universal Design with disability, rather than good design and innovation. We have much to learn from each other, but I feel that with IAUD, Japan has taken a remarkable lead in this new implementation phase of Universal Design. So congratulations to all my colleagues in IAUD. I look forward very much to presenting your work at our INCLUDE conference here at the RCA in early April and am sure it will attract much interest.

Future challenges

In my opinion, there are four key challenges that we face. The first, is take Universal Design to the level of design for delight. To do that we have to learn more about our customers, more about consumer aspirations and life-style goals.

The second, is to develop a more accurate understanding of user capabilities. That requires undertaking some serious research that will allow us to measure the impact on users of specific product and service features and to quantify the number of people excluded from using or enjoying what we design. We must also use that data to calculate the market impact of design improvements and innovations.

The third, is to learn how to promote and market Universal Design products and services to the consumer. This is a difficult challenge, as it will require big changes in marketing approaches and the development of new relationships with consumers. But, as consumers change their behaviour in radical ways, and share their opinions via the internet and mobile phones it will become increasingly important to communicate the real benefits and values of Universal Designs to end users.

In order to achieve this I believe we have to face the fourth challenge, which is to educate consumers. For years, the goal of advertising has been to bring brands to the attention of customers and maintain that brand presence. Now I think we have to encourage consumers to make informed decisions and make sure that they are aware of the benefits *and delights* of Universal Design.

There is a good example of this new shift on Japanese soil. The TEPCO lifestyle laboratory in Tokyo attracts over 250,000 visitors per year, and has demonstrated that consumers are hungry for unbiased information and the opportunity to test products before they buy. I hope that IAUD can build on this exemplar to develop new ways of educating tomorrow's 'wired' consumers