NEWSLETTER

Design For All Institute Of India

Chief-Editor
Dr .Sunil Kumar Bhatia
Faculty Member, 13, Lodhi Institutional Area,
Lodhi Road, New Delhi-110 003(INDIA)

Editor:
Shri L .K .Das
Prof& Head Industrial Design Center,
Indian Institute of Technology (Delhi), India

Associate Editor:
Shri. Amitav Bhowmick
Industrial Designer
Small Industries Service Institute.
Ministry of Small scale,
Government Of India, Delhi (INDIA)

Editorial Board:
Mr. M.L .Dhawan
Mr. Pankaj Sharma
Mr. Pramod Chauhan

Editorial Purpose:

Our mission of Newsletter   is to work as catalyst for Design at individual as well as organizational level of government and non government for spreading and exploring the new concept of Design For All/ Universal Design/ Barrier-Free / Inclusive

Contributor:

The Indian Designer in the International Scenario
Mr. Vickram Crishna
The International Center For Disability Resources on the Internet
Suggestions for an Introductory Course/Seminar for the Design For All Institute of India

Prof. Jim S Sandhu, Director, Inclusive Design Research Associates Limited

Art Engineering and Industrial Design
Mr. Mahesh Joglekar, Product Designer, Brisbane, Australia

Address for Correspondence;
13, Lodhi Institutional Area,

Lodhi Road, New Delhi-110 003India.

Telephone +91-11-27853470
E-Mail: Newsletter@designforall.in
www.designforall.in

Material appearing in this Newsletter may be freely reproduced.
A copy of the same and acknowledgement would be appreciated.

13 Lodhi Institutional Area, Lodhi Road,   New Delhi-110 003 (INDIA).
Initially it is Available free of cost to those have registered with
Design For All Institute Of India or those directly and indirectly Working
for the cause of Design For All / Universal Design /Inclusive Design/
Barrier- Free Design concepts.

For free Registration
Enter Your E-Mail: or Write
Subscribe@designforall.in
Visit our site:
www.designforall.in

Design For All redefines the Design Process.
Design For All connects with creativity of Individual and organization.
Design For All cares for those who are creative and work Creatively for betterment of the society with loyalty, We provide basic need of trust and sincerity to them And do not believe in their loyalty to our organization. Creativity come from any dimensions of any field, we create Conducive environment and provide right platform

Post Master:
Write Us about change
of E-mail address.

address@designforall.in

Advertising:
Acceptance of advertisement does not mean
our endorsement of the products.
By the Design For All Institute Of India.
To advertise in digital Newsletter

advertisement@designforall.in

News and Views:
Regarding new product or events or seminars
/ Conferences / workshops.

News@designforall.in

Feedback:
Readers are requested to express their views about
our newsletter to the Editor

Feedback@designforall.in

Forthcoming Events and Programs:

Editorial by Chairman:

This issue is dedicated to Indian Designers who want to prove their skills and worth to the world in spite of all odd and had even sacrificed their home to achieve their goals. They went to an alien country, culture for fulfilling their aims of life. I call them the true to motherland ambassador of the country. They are the people who anticipated the revolution of technology in communication which will change massively accelerate the exchange of people ideas, and money. A 'borderless world' will emerge. They were burning with the desire for proving themselves and had firm believe in their thinking. They went to different culture which had suddenly changed them .They might have question themselves in initial days 'How to survive in this new world'. Their answer was hard work, honesty and sincerity. We should not indulge ourselves to catch between cultures and conflicting loyalties. Living in another country is such an opportunity to learn... At the same time not to forget your roots. Some succeeded. I salute them.

The whole world is bestowing a lot of attention to India right now- Indian culture, films, music fashion etc. It's up to Indians to see that we don't end up being just an flavor of the season. The strong foundation of higher education was laid down on 1947 and after. In 2006,India is enjoying the dividend of that beginning.

 When I see the young person leave their home in quest for fulfilling their dreams I admire their courage. These young designers did something in their youth that most people wouldn't do and walked on a   few roads that

others did not dare to travel. According to me, in everybody's life there are times when you take

the wrong turn things so sour and sometimes it is just that everybody else says 'you're wrong', but you firmly believe that you're right. 'And sometimes you are bold but not careful enough or you're careful but not bold enough. "Whatever it is" it is declared, "its all part of the school life, an ongoing process, and, finally, it becomes history." Whether you succeed or fail. Sometimes victory does not place and paint you better in history and often your defeat takes the significant place in history. It is the individual - what for he/ she is fighting. What are their objectives .Is it for own benefit or benefit for all or for setting a good example for others? When I started the idea of establishing the institute, I mentioned to my friends" I am in that position where defeat and success will not affect my personality. I will remain what I am. That spirit has guided me and whatever little success I am achieving I am owing to all those who have helped continue to do so.

In earlier times, we were spreading our ideas either through religious persons visiting other places and influenced the local people or merchants were going for trading and the byproduct was the idea they discussed with the people they come across or military commanders conquered new areas and imposed their ideas on them . In the modern era you can't fight and win. But you have better ways to spread your idea by using technology, innovations and manufacture those items which can be used by all.

We have taken a challenge of completing the Herculean task of setting up the State of Art Design For All Institute In India and we can succeed only with the help of our well - wishers.

When you are in an unknown place and entertain a passion for doing some thing better in society , sometimes you regret your decision for leaving your own country   , you cry in isolation because no one understands your struggle. Tear enhance your wisdom and intelligence. When you prove yourself and

succeed,people around you feel proud but they seldom understand your pain, and agonizing frustrations.

My special thanks to Prof. Jim sandhu who has gone under the major operation and still on hospital bed with drip and agreed to contribute a article for our April 2006 issue of Newsletter .I pray for fast recovery and good health for Prof Jim Sandhu and Prof. Abir Mullick

With warm regards.

Dr. Sunil Kumar Bhatia

E-Mail dr_subha@yahoo.com
www.designforall.in

From The Desk of Editor:

It is a great pleasure for all of us that our Newsletter of March 2006 has received enthusiastic appreciation by critics, designers, entrepreneurs and government/non government organizations. The response was overwhelming from all walks of life. People are appreciating the contents and contributors but have criticized on us the size of our web site design www.designforall.in . We are sincerely striving on improvement of our presentation.

We are sending you our third issue of April 2006 monthly newsletter with the latest news from Design For All Institute Of India and the field of Design For All/ Universal design/ barrier free.

We do hope you will find this issue both interesting and informative. As ever, we are awaiting your proposals, criticisms and contributions.

Warm regards from the team of Design For All Institute of India.

Editor

The Indian Designer in the International Scenario
Vickram Crishna

Across the gamut of design, Indian design skills are recognised and valued to a varied degree. For every fashion designer who finds a ready market in foreign markets, there are dozens of film-makers who are reduced to honing their skills in their unpaid spare time.

To some extent, the issues are structural and deep-rooted. To the extent that many parts of the Indian manufacturing industry has grown inward looking and insecure through decades of protectionism originally intended only for short-term nurturing, a market conducive to the developmental growth of Indian design has been stultified. On the other hand, some sectors have long since outgrown their inbuilt strictures and provide a fertile platform for self-sustaining and expansive growth of their specialist designers.

Having said that, there is probably insufficient attention to innovative design and thought in our general skills training and educational institutions. This is a flaw in the educational process itself, and is hardly related to the problems posed by an indifferent industrial sector.

There is also a socio-economic barrier to independent entrepreneurship, especially in the nascent specialist skills. Oddly enough, this may now change, with industry growing increasingly outsource oriented. While such outsourcing is in the short term either weighing towards copycat design projects or outright import of second-hand or resold designs, it is probably inevitable that competition will drive original work within India itself, given the growing needs of local markets.

Without a strong local market, the ability of Indian designers to stay on top of their dynamic and complex markets at the international level is hampered, except in certain industries: music, animation and software being more notable among these. Undoubtedly there will be more such categories coming into the limelight in time to come, but this should not cause the human resource development stakeholders to relax.

At the international level, the ubiquitous presence of the Indian persona in modern society has also played a major role in paving the way to acceptance of Indian design skills. It is a positive sign that the stage is set for such a variety of new design areas, over and above the traditional areas entrenched in the former design school curricula, to succeed.

Vickram Crishna

Suggestions for an Introductory Course/Seminar for the Design For All Institute of India

Professor Jim S Sandhu
Co-chair, Design for the 21st Century, Rio, Dec 2004
Founder Member European Disability Forum
Consultant to the European Commission
Member European Cooperation in Science & Technology (COST)
Consultant, European Standardisation Committee
Member, International Federation on Information Processing
Director, Inclusive Design Research Associates Limited
Ron Mace Awardee
Consultant, World Bank
Consultant, German Federal Ministry for Overseas Development
Churchill Fellow on Disability Research to Finland, Sweden, Denmark, Holland.

Abstract

Design for sustainability, quality of life and social responsibility, or to put it more bluntly, design for marginalised groups in India is an enormous professional challenge. The level of success will depend on whether we are capable of adopting a multi-level approach that can synergize with other like-minded professions, organizations and bureaucracies in India.

How can design overcome poverty and environmental degradation? This is the starting point for the relatively recent but logical marriage of Design For All and sustainability and the very real challenges this provides practitioners. The discussion around some of these key issues and how they impact on people in the majority world is at the hub of this seminar/course which should be seen as the beginning of a wider process of understanding and awareness by designers and related professionals concerned with the Design For All Institute of India. Its prime focus is on enabling the targeted group to get to grips with key attributes of India in the context of poverty, shelter, sustainability and lifestyles. These challenges can be best expressed by a series of key questions that emerge from this seminar.

- How do we apply Design For All principles to people whose prime concern is survival and the uncertainty of the next meal?
- How can we practically incorporate *availability, affordability and sustainability* to the evolving principles?

Educational Value

This proposed seminar/course is an effort to link-up Design For All to the practical realities of the majority world's issues, lifestyles and poverty. In terms of educational content the tangible challenges to practitioners are highlighted – including issues concerned with sustainability.

Objectives
To make participants aware of Design For All in the context of:
- Majority World issues
- Poverty
- Housing
- Transport
- Life-styles
- Availability
- Affordability
- Sustainability
- Legislation

Evaluation Criteria

- Contextual awareness of Design For All and majority world issues.
- Tangible awareness of major problems and possible solutions.
- Understanding of poverty driven life-styles.
- Understanding of poverty and its knock-on impact on Indian society.
- Understanding sustainability priorities.
- Understanding differences between 'home' and 'shelter'.
- Awareness of policy issues.
- Awareness of the demography of poverty.
- Knowledge of legislation, regulations, advocacy groups and design interaction.

Theoretical Underpinning of Seminar/Course

Introduction

How can design overcome poverty and environmental degradation? This is the starting point for the relatively recent but logical marriage of Design For All and sustainability and the very real challenges this provides practitioners. The discussion around some of these key issues and how they impact on Design For All started was started by the author as a heavily illustrated seminar based at the University of Buffalo, New York, to inform Western designers about majority world issues. This proposed seminar is partially drawn from it.

The one theme running throughout the seminar is that Design For All not only provides a framework for action but is an approach that values and celebrates human diversity . Further, as a product of social policy inclusive design can restore equity and enhance citizenship. This can be called the politics of sustainability and civic rights. This means that Design For All does not operate in a political vacuum but at the very forefront of societal change where 'commitment' and 'values' are the driving forces. To stretch Sartre – Design For All is a humanism.

Rationale

This seminar/resource should be seen as the beginning of a wider process of understanding and awareness by designers and related professions in the majority world. Its prime focus is on getting to grips with some of the key attributes of the majority world. These attributes provide some of the greatest challenges to the practice of design in the world. These challenges can be best expressed by a series of key questions that emerge from the visual material and its description which will subsequently form part of this seminar.

- How do we apply Design For All principles to people whose prime concern and uncertainty is the next meal?
- How can we practically incorporate *availability, affordability and sustainability* to the evolving principles?
- In India the word 'shatri' can refer to an umbrella or a range of makeshift shelters. At what point does a shatri become a home?
- Is it possible to define an ideal shatri that fulfils functional, social, psychological and aesthetic need of the inhabitants?
- Can the pavement dwellers in major Indian cities ever develop the feeling of home?
- For over-crowded people how can we reintroduce the concept of privacy and improve their quality of life?
- How do we recognize that for a vast number of majority world people the concept of the 'door' does not exist?
- The same could be said of basic standards, building codes, regulations, planning permission, health and safety, accessibility, services infrastructure, etc.
- In the above context what does one make of facilities such as the bathroom, toilet, kitchen, entrance door, vestibule, corridors, ramps, lighting, acoustics, etc?
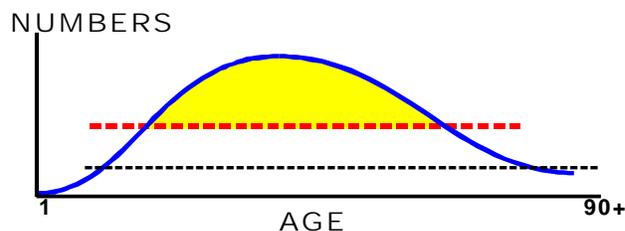
Design For All

The title covers a range of over-lapping phrases whose adherents usually claim exclusive rights and insights to their own particular version. Some of the more popular ones are: inclusive design, design-for-all, barrier-free design, transgenerational design, design-for-the-broader-average and design-for-the non-average as coined by the author for a new course for post-graduate architectural students at the Polytechnic of Central London in 1973. Despite their varying focus the essence of all these definitions can be synthesised into – Design For All.

Design For All is the concept which focuses on achieving accessibility to structures, products and services by planning for the fullest range of human functions at the blueprint stage. The two main goals of Design For All are (1) to enable accessibility to the widest range of individuals and (2) to eliminate the need for retrofitting and reconstruction. Design For All is one aspect of a larger trend world-wide which focuses on civic rights and inclusion in place of the patronising politics of tolerance and competing interests. Fundamentally, it is an approach that values and celebrates human diversity. In the context of disability, it highlights a major paradigm shift – from treating people as part of the medical model, as dependent, passive recipients of care, to a model where people are treated as equal citizens and disability is seen to be either irrelevant or merely as a social construct.

With the above broad characteristics of Design For All in mind it can best be illustrated using the following simple diagram:

Design For All

The shaded area at the top of the bell curve depicts mainstream design which largely ignores Design For All principles thereby excluding a greater range and number of people especially those who are disabled, elderly, left-handed, colour blind, poor, etc. Ironically, this lack of consideration also results in a smaller market- base. The bottom dotted line highlights that it is possible to enlarge the range and number of users, and the potential market base by using design precepts culled from user-focused design, validation, verification and. evaluation exercises.

Despite India's well-known and ancient exemplars of Design For All such as the charpoy, lota, sari, langoti, etc.,

it is obvious these products cannot be used by everyone — just as no single pair of 'chapples' will fit all feet. By definition if all products and environments were hundred percent accessible to all there would be no need for such a concept as Design For All. Conversely, Design For All is also not a panacea or magic formula to solve all design problems. There are clear cut-off points beyond which a product becomes inaccessible to certain groups of users. This means a specially modified car for a tetraplegic driver would NOT fall under the Design For All lable. The same would apply to one-off designs and add-on modifications. These designs would fall under the assistive technology or devices umbrella. On the diagram these would be represented below the lower dotted line.

Poverty & Discrimination

It is vital for the designer to understand poverty in all its manifestations but also to be able to draw a line between its theoretical and practical dimension. Without a close understanding of this dimension Design For All can only operate in the void by definition — a central tenant of this seminar.

Poverty is deeply embedded in social structures which are geared to exclude the poor. Social exclusion is a process of discrimination which deprives people of their human rights and results in unequal and fragmented societies. Institutionalized racism in the form of slavery in the US and subsequently in South Africa in the form of apartheid was responsible for extreme inequality in income, land and civic rights. In more ways than one, human beings were reduced to objects for pure exploitation.   Gender discrimination remains the most common form of discrimination world-wide, leading to reductions in levels of economic growth. Practices and ideologies associated with caste in India limit the access of groups of people not only to ritual functions but also to political structures, basic services, education and opportunities to improve their well-being. In many cases, forms of deprivation overlap, which leads to greater disparities; a girl of scheduled caste in particularly poor rural areas of India being at one extreme of the scale. It would be even more extreme if she was disabled. That is rock bottom — a vicious cycle where escape is impossible.

At a socio-economic level poverty and disability or ageing are inextricably linked. If you have no state support for your infirmity, which is usually the case, you invariably end up begging for your livelihood. *Designers have to take note that the aggregate numbers of poor people are striking but this fact alone cannot describe what it is like to live in poverty.* The author's experiences in several countries and dialogues with poor people, including close relatives, emphasize the multidimensional and dynamic nature of poverty. Interestingly, the number of established designers from rural backgrounds in the majority world can be counted on the fingers of one hand. I despair when American friends try to link their understanding of poverty to their slimming regimes, forgetting that they and their children are throwing away vast amounts of uneaten food daily.

We seriously need to understand how poor people experience poverty in order to be better practitioners. People in rural areas are primarily concerned about food, security, lack of work and health facilities. In urban areas the poor place more emphasis on the quality of work opportunities, lack of access to water, violence, unsanitary housing, and increasingly environmental pollution resulting in respiratory problems.

The lack of access to a particular material asset, such as good quality land for agriculture and housing, is central to many descriptions of what it is like to be poor. Inability to access good quality health care is another. The poor perceive unemployment, underemployment and consequent exploitation and low wages as endemic to their situation. Physical health is vital to obtain work and generate income, while education generates options for future generations. One inescapable fact that emerges from this is that the poor cannot really afford to be ill. Illness usually leads to death or a life sustained by begging.

Natural Disasters

Natural disasters are frequent in the poorest countries. The poor are by far the largest victims of natural disasters, because they often only have access to low cost assets (for example land or housing) which are more vulnerable to the elements. Unless people can

preserve or reconstitute their asset base during and after periods of natural disasters, the numbers in poverty will increase and the depth of poverty will intensify. The international community is beginning to understand the breadth and depth of the impact of natural traumas. If the assets of the poor cannot be protected, direct asset transfers are needed to facilitate recovery

Globalisation

We are all increasingly connected to individuals we will never meet, from places we may never visit. Many of our electronic equipment, shoes, or clothes will have been made by them thousands of miles away. The fruit and vegetables for our food, the coffee in our cup, the rug on our floor, the investment in our company, the fuel in our cars and many other products we buy in our shops have come, probably, halfway around the world.

The world is smaller than it has ever been. Its six billion citizens are closer to each other than ever before in history. Jobs in Europe and the US depend on trade with or investment from abroad. We travel more, but so does pollution and diseases, as seen in the recent spread of SARs. Paradoxically, we are closer yet further apart.

As we have become increasingly more connected the process has been called globalization. Whilst the quality of life rises for many as a result of globalization, more than a billion people live in extreme poverty, forced to live on a tiny income and very poor or no services. More than 600 million amongst this group are disabled – largely due to poverty, malnutrition, environmental pollution and attitudes.

But reducing poverty is not just a moral issue. The closer we are connected across the continents, the more we become dependent on each other. Moreover, if we do not take action now to reduce global inequality, there is a real danger that life for all of us – wherever we live – will become unsustainable.

Urbanisation

Aside from the issues of pollution and a sustainable environment we can see in the accompanying illustrated resource how the poor are increasingly migrating to the cities in search for jobs. This process has been called the fastest urbanization in history. In the context of sustainability how can Design For All make sense of cities which are already teeming with chaotic living conditions, poor health, crowded communities where privacy or silence does not exist, and the environment is extremely polluted? How can design grapple with the ever-widening cycle of poverty and creeping paralysis in the world's bastis, barriados, favelas, kampongs, gecekondos and the like? Aside from legislation and social provision design can be a powerful tool for adding to the quality of life of the urban outcastes. As practitioners designers have barely touched the topic. Yet this is precisely what we need to do if Design For All is to evolve beyond some excellent theoretical principles.

In the context of sustainability another major stumbling block in actioning sustainable design in such situations is that the problems are multi-dimensional by nature. But the institutions and bureaucracies that are meant to be tackling them are uni-dimensional. And government departments the world over rarely network to meet multiple objectives

Environment

As the environment is a global issue its impact on India has to be viewed from a broader perspective. We are perhaps the first generation to see the downside of the industrial revolution. By now, it should be clear that our environment is becoming ever less capable of sustaining the growing impact of our economic activities. Everywhere our forests are over-logged, our agricultural lands over-cropped, our grasslands over-grazed, our wetlands over-drained, our seas over-fished, and just about the whole terrestrial and marine environment over-polluted with chemical and radioactive poisons. Worst still, our atmosphere is becoming ever less capable of absorbing either the ozone depleting gases or the greenhouse gases that are generated by our economic activities.

The ice cap is melting due to the greenhouse effect. This in turn is raising sea levels, which is effecting landmasses around the world and changing our climate. Witness the floods and fires in several countries a few years back. Seawater is 97 per cent of the earth's water supply. We have long regarded it as a sink into which we can pour pollutants. As a result virtually no part, no matter how remote, of our oceans is free of contamination.

Two main forces drive these changes: on one hand is unsustainable consumption of the Earth's resources, mainly by and in industrial countries. In others the problem, exacerbated by population increase, is pressure on resources. Interestingly, these problems were seen very differently by the participants at Rio in 1992. On one side the industrial countries comforted themselves with the belief that environmental degradation was essentially a problem of the poor. They were ready to provide some help. But few recognized the scale of the problem or their own direct involvement. None volunteered to be an example of restraint. The US was particularly at fault. With about 5 per cent of the world's population, it produces 25 per cent of the world's pollution. No wonder it refused to sign the Kyoto accord on pollution reducing targets.

The US is also the biggest daily producer of domestic, commercial and industrial waste in the world. The five boroughs of New York surpass all other world cities. New York gets rid of its rubbish in the biggest dumping ground in the world – Fresh Kills on Staten Island. But ofcourse, garbage is a major issue for all countries, and therefore, a major challenge to designers.

In these circumstances, it is ironic that designers, instead of generating ideas for recycling this Everest of waste are actually increasingly focusing on a disposable world: suits, shirts, ties, underwear, socks, nappies, razor blades, pens, containers, packaging, mobiles, and there is even talk of disposable furniture and laptops. This is contrary to the principles of Design For All and sustainability. There is no doubt that this approach has to change drastically.

Conclusion

The Design For All Institute of India stands at the cross-roads – whether to concentrate on mainstream design issues that focus on the burgeoning middle class or the vast majority of the population which is rural, agricultural and largely poor. If it is the former then it means following the approaches adopted by Western designers who are largely unaware of the Indian scene. If the latter, it presents a greater challenge but also has a tremendous potential for making a greater impact on a greater range and number of people.

This means the Institute has to evolve a clear policy, objectives and measures for success if it is to make progress. In the end it is the as yet silent voice of the Indian masses that must dictate the Institute's agenda rather than western 'experts'.   The proposed seminar/course is but a small step towards setting the scene, clarifying goals, prioritizing objectives. Design For All is a form of humanism. The author has no doubts that once the agenda is set India would be in a strong position to help others in the majority world.

To sum up, any emerging agenda worthy of its name has to consider that pressures on the environment are increasing. We have to deal with climate change, the erosion of the countryside, creeping desertification, the cutting down of forests at a pace unprecedented in history, growing quantities of waste and chemicals that get into food, air and water; the degradation of habitats and the increasing pace of urbanization. If progress is to continue, *we now have to put the elimination of poverty at the heart of decision-making on every issue: from sustainable employment to housing, from industry to energy, from telematics to farming*. The central message of this seminar is that Design For All has a key role to play in the amelioration process in India and elsewhere.

REFERENCES

 Papanek, V., 1983: Design for the Real World. Thames and Hudson.

Coracostas, P., & Mulder, U., 1998: Society: The endless frontier. European   Commission.

Sandhu, J. S., 2001: An integrated approach to universal design: Towards inclusion of all ages, cultures and diversity. In: Universal Design Handbook. Edited by Wolf Preiser & Elaine Ostroff. McGraw-Hill.

Sandhu, J.S., 2002: Multi-Dimensional Evaluation as a Tool in Teaching Universal Design. In: Universal Design: 17 ways of thinking and teaching. Edited by Jon Christophersen, Husbanken, Norway.

Prof. Jim S Sandhu

ART_ENGINEERING_INDUSTRIAL DESIGN
Mahesh Joglaker

Preamble

The idea of this article is to give a basic idea about the profession of Product Design Engineering. It is written for general public so my advance apologies to those readers who are already in the design profession.

In writing this article I come across couple of challenges, one was how to write on a subject like design without any pictures, photos etc and the second was to make it relevant to most of our group members who are mostly residing in India. Sine most of my working life so far I have worked overseas I struggled to give examples of products easily available in India.

Design is a vast subject ranging from Graphic design, Architecture, Ship design to Mechanical Product design, What I have described under Product Design Engineering is only one part, mostly Mechanical Product oriented Design (such as Consumer Products :washing machines, Office furniture, Medical Devices etc.

Lastly the article is aimed at explaining the Profession and not about me as a practioneer of this profession (although there is some ref to my own experiences) Hope all of this is not too technical and you find it interesting.

Product Design Engineering

Have you ever wondered what goes behind the scene in getting products like a small Needle to a Jumbo jet from concept to production! It certainly is not an effort of one profession but diverse professions from Material science, IT, Production and many more (even accountants!). One of the important parts in this chain is Product Design and Development in particular the Science, Engineering and the art of designing a product which is:

- Fit for the purpose (does the job: A knife designed for cutting bread should be suitable for soft bread)

-        Has proper shape and size (user friendly: Knife handle should be comfortable)

Is manufacturability within budget (Knife sharpness should be achievable by available production methods)

Do you remember the days when there were only 2-3 car designs available in India and may be 1-2 major home appliances and you had to wait 8-10 years to get a two wheeler, As the Indian market opened up the demand for more variety in product has gone up and with it the need to design more and more innovative and market driven products

Product Design Engineers (PDE) and Industrial Designers (ID) are the key people who make it happen. They are basically two sides of a coin, An ID can be described as somebody who has the creative skills like an Artist but also has the knowledge of Manufacturing Engineering in a commercial, industrial environment. A PDE is basically an Engineer at core (mostly mechanical) who may not have the creative skills but knows how the design process works and how to take a product from Design to manufacture.

Process of design:

It all starts with identification of a need (as they say necessity is the mother of invention) the need may come from

- Market conditions (shortage of paper forces the packaging industry to design re usable envelopes)

- Changes in laws (Government bans use of high fuel consuming vehicles)
- Somebody's pure inventiveness! (I remember a guy who used to visit our engineering college with all sort of contraptions every now and then, once we saw him on the grounds horizon where he was bouncing up and down… like a Yo Yo that day he had designed a bicycle with so many shock absorbers that the ride was smooth no doubt but it was so heavy that no body in their dreams would have liked to ride one!

So what we Product Designers do is start with creating a <u>Product Design Brief,</u> basically a set of guidelines defining things such as

- What the product has to achieve, (Functions: Shall cut bread or shall cut meat + have feature to peel potato!)

- Product mix (No of Knifes in a package , Deluxe model with wooden holders)

- What technology (Disposable or long life with no sharpening)

-

And obviously PRICE

Design in progress

Normally at this stage It is not only the R &D but almost all the major departments within a organization have input in this document such as Marketing, Manufacturing, quality, costing and sometimes Legal (to make sure that the product concept itself does not create major legal headaches (The concept might already be patented and there is no point in spending any time in exploring it)

Design alternatives:

It is with all these multidimensional aspects in mind the

designer start the work of getting some basic concepts, and buzz word here is Con current Engineering, i.e. to consult other functions from the beginning and not in the end (Can the plastic molding process crate the part that I am designing? Consistently (Quality))

It is interesting how different factors affect the design, here is a simple example of market conditions affecting design in case of a washing machine design

Aspect	Japan	Saudi Arabia	India
Capacity	Small to Medium	Large (Arab robes)	Small to medium
Cost	Less sensitive	Less sensitive	Very sensitive
Water pressure	High pressure operation	High pressure operation	Must operate on Low
Size	Small , Within XYZ	Large Ok	Small , within ABC

Other factors that may affect design is

Environment: Now a days Bio degradability of material used in production plays a big part in material selection which in turn may affect design (minimum wall thickness of a part)

Market practices: Labor is very expensive in Australia so if you are designing a Truck which carries bricks (which are palletized) must have a compact crane mounted; same Truck can be designed in say Indonesia without a need for the crane as labor is available at lower prices.

Perceived quality: Recently one Kitchen appliance company in Australia come up with a range of appliance named "Home Café" The idea was to offer Mixers, toasters etc to the home market but they should be designed more like commercial café's equipment: More robust (More metallic) as market survey showed that more consumers are getting in to gourmet food making at home. Another opposite example would be in my previous work we bought a product concept where the Door Knobs were interchangeable and in plastic, however the market rejected this idea as door locks/ knobs are associated with security and plastic no matter what is perceived as weak.

Price: Cost of freight could be an issue, forcing the designer to design the product in a Flat packed design. IKEA of Sweden is actually famous for their flat packed design in furniture and household goods, Sometimes it is just impossible to enter a market above a certain price, forcing the design process to look for cheaper materials and processes on the other hand in critical products such as Implantable Medical products, Compatibility with human body is non negotiable, hence the price somewhat takes a back seat.

Theme based design: There could be many examples where the Product design has to fit in a theme such as

- A Wine bottle with Indian sounding name like "Madira" has to have aspects that evoke the images of the Indian
- architectural on the other hand a Perfume called "
- Manhattan" might have to have a bottle and packaging with very minimalist urban related profile.
- A housing estate with a "Nautical" theme may require heavy usage of Blue color for a set of outdoor furniture and sea related motifs in the armchairs!

Cross professional practices:

Anybody can be a designer: yes that is true, Ideas come from various fields but normally they are related to what you do in everyday life. Sometimes to experiments other related professionals do dabble in to product design, Some time ago in Melbourne a group of Architects way asked to design a set of Tea/ Coffee sets based on the theme "Skyscraper" Needless to say many designs looked like Tall building !

Sometimes artists also come up with interesting products as one offs. However in Manufacturing large sums of money are involved and Industry tends to have professionals Industrial designers and Engineers to undertake the job responsibility.

Nature of business / or rather marketing methods also have an great effect on Product Design engineering: take for example a Hollywood film, it is no longer just a movie it is a multi product release business exercise so the entire Design process may have to cater not only for Cinema

posters but DVD Jacket design to a release of Soft and hard toys based on the movies characters (Think Batman) sold in millions through fast food outlets.

Maturing Design fields: At the end of the day the product might be electrical but it is still a physical product hence Mechanical engineering plays a big part. Having said that there are some fields which have emerged as specialist within the Product Design field to name a few such as:

Furniture design: Indoor, Outdoor, Office
Medical Devices: Due to its specialist nature and close association with a equally complex filed (Medicine)
Interior Design: Some of Interior designers also do furniture design Foot wear, Sports and leisure wear, White goods

Lateral thinking:

One of the most used but hard to define aspect / skill is lateral thinking in design: A Product Developer always should ask a question "What if? What if I combine this and that, what if xyz is eliminated... is there an alternative process of manufacture.
One good example I recently come across is a Plastic raw material manufacturing company has come up with a special plastic and a manufacturing process where a designer can design a single body plastic chair where the frame is rigid to take the load but the seat and the back area is flexible.

Technology in Design:

If anything that has improved and expanded what the designer can do is the advent of Technology in particular Computer Aided Design and Manufacturing, Let me explain with a simple example:

- A designer can design a new Mobile phone hand set on a modern computer as if he or she is sketching it in conventional way on a drawing board in 3 dimension directly using Computer aided Design (CAD)...

- At a flick of a button the designer can switch colors of the model, change size, and come up with different

configurations. The 3D image can be seen by all interested parties via the net no matter where they are (a global marketing meeting for the new phone!)

- Within few hours a physical prototype can be made using latest Rapid Prototyping method, it will be very accurate as no manual interpretation is required as the CAD model is directly used by Computer Aided Machining method (CAM)

 - All the physical attributes of the product such as weight, material usage, Manufacturability, Strength can be accessed from the 3D model so cost can be worked out.

It is not only for internal use that CAD is used, for marketing purposes a company can "Publish" 3D images of the product, create instruction videos in a virtual 3D CAD environment.

India in particular is playing a role behind the scene for many world giants by offering lot of this CAD/CAM services (Just like the IT sector).

Glamour and Grind:

How would you like to see a product designed by you being used by thousands of people world wide...? I once did get such a buzz out of my job when I designed and commissioned some new designs of Door Handles and saw them in a big new hotel. No I am no where near a "Star" designer... In fact unlike Film, Clothing, perfume Industrial/ Product Designers rarely get in the glitz. It is more the grind of getting the project within budget, dealing with day to day production issues Dealing with impossible demands from Marketing (like a farmer they always want " a buffalo /cow with short horns which gives plenty of Milk and cost next to nothing...") and last but not the list the Bin counters (mostly opposite end of the creative process but closer to the Management...$$$$)

However there are few world famous designers such as Philip Stark and others who designed famous Lounge chairs, Home appliances, and Airline seats.

However it gives you a great "high" when you see a product that has gone from concept

How to become one:

So does this all sound interesting, there are few ways to become involved in Product Design Engineering / Industrial Design field.

India: (I stand corrected if there are other avenues than I am suggesting) ID is still a maturing profession in India, mostly Mechanical engineering with design aptitude end up working in R&D sections and end up being part Industrial designers and PDE. However there are two institutions where there are dedicated courses

1) IIT Powai, Mumbai has a Masters in Industrial Design http://www.idc.iitb.ac.in/admissions/qualifications.html

2) National School of Design in Ahamdabad

Overseas:

Industrial Design (ID)in particular is well established professional in major western countries and some institutes have combination courses where Mechanical Engineering course may have an aspect of Industrial Design (hence the term Product Design Engineering.

Job Prospects:

India: More and more companies are becoming aware of the importance of R&D and major manufacturers are ploying people in this area, Mainly Automotive, Home appliances, Some furniture manufacturing and limited amount in Architectural product. As more and more original Design activity (as compared to copy from a JV partner) happens in India this activity will increase.

There might also be aspects very specific to India being a predominantly a rural economy and a developing nation such as Design of Product from Natural materials, Tribal way of life, Low energy consumption and renewable energy based product designs (one example is a south African designed radio and light with crank handle)

West: Particularly in countries where Technology based businesses are more prominent as compared to Primary Production and Tourism more Product design activity happens (Example Germany compared to New Zealand)

Also the variety of activity where gadgets are used is more. Example Golf, Camping, Hobby Aero planes etc) By nature Industrial Designers are like creative artist or Architects and in the west there is a tendency to work as independent fractioned however large manufacturing organizations do employ staff Product Designers. This gives some stability, however the variety of work might be limited and makes you a specialist in one filed only. Working with consultancy certainly gives you more variety. One month you might be designing motorbike seats next project might be a Refrigerator door

Here are some interesting sites in Australia and New Zealand

http://www.dia.org.au/

http://www.betterbydesign.org.nz/

Info about PDE at

http://domino.swin.edu.au/__CA256F56001FE705.nsf/cfdrAllCoursesByCourseCode/DDA068200A326458CA25678E0007C4A8?OpenDocument&filter=D

Description

Product Design engineering is a combination of two traditionally separate fields each with its own strength: engineering with its scientific material and manufacturing knowledge and industrial design with its human-centered approach. These two disciplines have been brought together to produce a new graduate who will develop competitive products in both quality and design. The subjects studied during the course are equally shared by the Faculty of Engineering and Industrial Sciences and the Faculty of Design. These subjects have a focus on creative design, engineering science, material and manufacturing process selection, project management and innovation

Aims & Objectives

 The main aim of the course is to educate a new generation of creative product design engineers with the knowledge, skills and attitudes that make them valuable members of

any team working with product design, development and production. This aim is to be achieved by providing a project driven course that covers the required disciplines of creative design in parallel with studies in engineering science, materials and manufacturing processes and management of innovation.

The course objectives are to:

* Produce graduates with a sound knowledge of the principles and processes of product design.
* Develop the ability to design products with a sound engineering base.
* Develop student knowledge and understanding of traditional and innovative processes in designing and

developing successful products for competitive markets.

* Educate students in making suitable material selection

based on human/machine/manufacturing requirements.
* Produce graduates with sound management and professional skills that will be able to incorporate social, environmental, legal and ethical issues in their product design

Program And Events:

1. Dear Friends
   We invite you all for
   Design Degree Show- "DEEKSHA06"
   Date:7th-9thApril'06
   Venue : Lecture Theatre ,M S Ramiah School Of Advanced Studies,   New BEL Road ,Bangalore.
   Thanks

     Prakash Unakal
     Head-Producr Design Center
     MSRSAS
2. Dear members,

i would like to introduce myself as s. sethuraman ,principal designer at the national institute of design, ahmedabad .i belong to the first batch of product designers trained by Prof .kumar vyas during the

years 1966-1970.i have been with nid ever since as a faculty member trying to understand the field of design. nid has been kind enough to give me a sabbatical for year from may15, 2006 to may14,2007.i have been thinking about the subject of conceptual excellence in design. Although there may be many good design fulfilling certain criteria, there are among these good design some ideas stand out as a conceptually excellent approach to problem solving. in science and mathematics and other areas including literature, we could locate conceptual excellence. the idea of my sabbatical is to discover form the product design perspective, product ideas which have the quality of conceptual excellence. one may ask, what should be the criteria for selecting such objects? I would like to go through the exercise differently, by first getting from the members, there own list of products which they consider as products of conceptual excellence and also there own criteria for selecting them. the products could range from craft product ,product made by people or group for their own needs, contemporary products or any ting members consider as product with conceptual excellence. i will collate these ideas and find the common factors on what we generally hold as products of conceptual excellence.

based on the inputs ,I will also interview some of you for detailed discussion .i am not very sure on the direction this project will take similar exercise could also be done for graphic design based on this work.

i also need suggestions on how to do such a study globally, as different cultures have produced objects of conceptual excellence in their own context. Kindly send your views to me personally to this email id sethuu@gmail.com
thanking you all for the patience to read this long mail.

s. sethuraman

industrial design faculty,
1966-70 batch from nid

3. We have formed our academic committee for designing our different programs curricula. The committee has begun their work and will submit its finding to Prof Lalit Das for preparing the final drafts. The following members have agreed for discussions. Members are listed in alphabetical order

 Prof. Abir Mullick, Prof. Dr. BJ White,
 Prof Jim Sandhu, Prof. H. Overbosch

,Prof. Lalit Das (Chairman), Prof Richard Duncan, Prof. Ricordo Gomes, Prof. Steinfeld Edward, Dr. Sunil Kumar Bhatia

4.Dear Designers,

  Designers regularly use and create a great deal of IP and should systematically consider the steps required for protecting, managing and enforcing it, so as to get the best possible commercial results from its ownership. The utility of Intellectual property protection provisions to obtain rights and returns on knowledge, innovation and creativity has been tremendous. It is well recognized that the knowledge of Intellectual Property Rights is important and imperative for creative design professionals.

  Realizing this requirement, National Institute of Design (NID), India, and World Intellectual Property Organization (WIPO), Geneva, with the support from Department of Industrial Policy & Promotion (DIPP), Government of India is jointly organizing a National Seminar on Industrial Design and Intellectual Property Rights during 25-26 April 2006 at National Institute of Design, Ahmedabad. The eminent professionals from India and abroad would give their deliberations in their respective areas of expertise.

  Participation will be limited to a maximum of two hundred numbers on a first come first serve basis. This seminar would be beneficial to everyone in the creative field including designers, architects, managers, retailers, legal and paralegal, other professionals and students of diverse fields. It would benefit also to others yearning to increase their sensitivity and knowledge related to Intellectual Property.

  The details of the seminar are enclosed herewith for your kind perusal. We will be glad to receive your participation or nominations from your organization for this seminar. We would appreciate if you can also send this information to other interested. You can register online at

http://nid.edu/academics_iprnationalseminar.htm

looking forward to brisk participation from the Indian Design Community.

Thanking you profusely with best regards.

Truly,

Bhavin Kothari
Research Associate, IPR Cell – NID

5. Dr. Rudiger Leidner of Design For All Of Germany has organized in the mid of April 2006 a conference on the topic : Cities and Municipalities designed for all , in German language. For further detail you can contact:

leidner@skynet.be

6. The last date for submission of Application Forms is 5th of May 2006.

From this year, the entry is open to students with B.DES/B.Arch/BFA/MA/MSc/Under graduate Diploma in Design of NID or
equivalent degree

as well as with postgraduate (M.Des) from IIT's & IISc or PGDPD from
National Institute of Design, Ahmedabad and equivalent programs in
design

Further details are at
http://www.idc.iitb.ac.in/academics/phd.html

Feedback:

 We are sorry to inform all those who have encouraged us by giving us their valuable suggestions, comments and appreciations and we can not accommodate all and we have selected few letters on first cum first basis. Our intention is not disheartened and discouraged any one .Your guidance is source of inspiration for us. Kindly do write us and help us in making our efforts world class.

Editor
Prof. L.K.Das

Dear Dr .Sunil Kumar Bhatia,

I would like to take this opportunity to thank you for your consideration and invitation to become a member of curriculum development committee for the Design For All Institute of India. I am very flattered and humbled to be associated with such a noble and essential academic endeavor, as well as prestigious committee of scholars and practitioners in the field of Inclusive/Universal/Design For All.
For your reference, I am attaching curriculum syllabus from two (2) courses that I instruct in the Design and Industry Department at San Francisco State University, DAI 400: Product Design and Development; and DAI 800:

 Graduate Seminar in Design - "Inclusive Design and the Future Society."

DAI 400 is an upper-level undergraduate product design studio class which focuses on inclusive/universal design principles and consumer product applications. DAI 800 is a graduate level seminar which focuses on Design for Social Responsibility, which features inclusive/universal design principles, methodology, reference articles and case studies.

The proposals for various academic levels of curriculum and program development are very inspiring, admirable and commendable.

I look forward to further corresponding with you and the other designated members of the committee in the realization and accountability of such a scholarly institution.

Best Regards,

Ricardo Gomes, IDSA
Chair and Professor
Design and Industry Department
San Francisco State University

Dear Sunil/Das Sir,
Excellent initiative from "Design for All" Editorial board.

The Depth of the article is far superior than what we have seen in few of national/international seminars. Maslow's needs were indeed well put forward.

We from Product Design Centre at M S Ramiah School Of Advanced Studies welcome this type of activities. I liked about this "designforall" activities is more of action less debate or talk. kudos to the team. some things for you all are going in right direction please continue the good.
Let us know how best we could collaborate and help out each other,
Thanks...
Prof. Prakash Unakal product design centre.
M S Ramiah School Of Advanced Studies, Bangalore

Dear Sir,

First of all let me congratulate you for this novel initiative. Such newsletter is really needed. I would love to contribute to it.

Pls. do not mind for sharing the feedback about the title of the newsletter 'Design For All Institute Of India'. May be, add some punctuation marks. It sounds grammatically incorrect to me. One would always want to read like All Institute(s) of India. If you connect 'all' with institutes, a plural _expression will be needed. I have some suggestions.

Design for All: The Institute of India
Or

"Design for All", The Institute of India

Or
Design-for-All Institute of India
Let me know if you find any sense in my feedback.

With best regards,
Dr. Dinesh S. Katre

Dear Dr. Sunil Kumar Bhatia,

How much material do you have on your site on Web Accessibility?

The International Center for Disability Resources on the Internet has quite a lot, and you might want to link to us at http://www.icdri.org We could write an article for your newsletter.

Do you know Atul Pant? He is on our advisory board as is Vickram Crishna. You will see their information at http://www.icdri.org/about_us.htm

Let me know if you would like some help.

sincerely,

Mike Burks

Chairman

The International Center for Disability Resources on the Internet

http://www.icdri.org

Dear Sunil,

I just received the second edition of your very comprehensive news letter. Congratulations to manage such an edition every month.
Before giving you some information on the DFA Community in Germany, however, I would like to tell You that only your newsletter is accessible for people using Windows screen reader programmes for blind computer users, whereas your website is not accessible for them at all. I strongly recommend to redesign your website and aplly the WAI standards.

15 months ago I founded together with Peter Neumann the German member organisation of EIDD (EDAD: Europäisches Institut Design für alle in

Deutschland e.V.). Last year we hosted EIDD's

annual conference "Culture for all" in Berlin and next month we are carrying out our own annual conference "Cities and municipalities designed for all". Unfortunately all contributions except one will be in German, so that I cannot suggest you to have a look at our website (www.design-fuer-alle.de).

I work in the tourism unit of the European Commission (returning to the German Ministry of Economics next year). Recently I wrote an article for a Japanese journal regarding tourism for all in Europe. If you are interested in the subject, I can forward it to you. Peter Neumann is expert in the field of accessible tourism and author of the study "Economic impulses of accessible tourism for all". The study refers to Germany only, but it is the first study that presents quantified results of accessible tourism revealing that more than 100000 jobs could be created and the tourism industry could double its turnover from disabled tourists travelling more in an accessible environment. It is available in English too.

If you have any questions with regard to tourism or Germany, please do not hesitate to contact Peter Neumann or me.

Looking forward to hearing from you,

with the very best wishes

Rüdiger

To: Dr. Sunil Kumar Bhatia, Chief-Editor, Design For All Institute Of India, New Delhi

From: Soisik Habert, Officer-in-Charge, Office of the Rector, United Nations University (UNU), Japan

Thank you for your message of 8 March introducing the inaugural issue of the newsletter of the Design For All Institute of India. While we appreciate the importance of your initiative to publish and disseminate the concept of

universal design far and wide, we are afraid that the United Nations University (UNU) does not engage directly in this area and therefore is unable to contribute to your effort.

With our best wishes for success with your continued endeavours,

Yours sincerely,   ****************************

United Nations University (UNU)

5-53-70, Jingumae

Shibuya-ku, Tokyo 150-8925

JAPAN

E-mail: mbox@hq.unu.edu

URL: http://www.unu.edu

****

Acknowledgement:

I am thankful to Prof. Richard Duncan of North Carolina State University, Center Of Universal Design for encouraging us from beginning to this stage. He is the person to whom we can trust and in difficult phase of our Institute he only wishfully ready to help us. Sometime he foretell and ask us to prepare .I can't explain what sort of relation we have .He is mentor; philosopher and above all he accept all responsibility and devote his energy to make that responsibility a successes. His constant advice is source of inspiration to us and we always look at him when we face crisis.

Appeal:

1. Design for All Institute of India appeal to their members, subscriber and well wishers kindly contribute little time ofthinking for ways of establishing the state of art Design Institute and in what way it can benefit all living.

2. We seek opinion on formulating curricula of different program of 1-year of   2-semasters for beginners, 4-year Bachelors program of 8-semsters, 2-year master program of 4-semsters and areas of research for PhD program. It is a backbone of society and if we produce competent workforce for future use we can make a better society. All the experts, intellectuals, philosophers of different walks of life should contribute their opinion freely and help us in making a world class Design Institute.

2. Those who are really working for the cause for the betterment of society and are known to few persons in and around are working at individual level or looking for some platform to raise genuine issues or not being registered with any institute/ organizations, either you can e-mail us .We will request them to join our institute and we can work mutually for common cause in effective ways or they are welcome to us and directly registered with us through e-mail or write to our correspondence address.

Job openings:

These job openings are informed to us by our members and we don't claim any responsibility. It is just a beginning.

Editor

1 Dear All

Symbiosis Centre of Design (a constituent of Symbiosis Deemed University), Pune is looking for "Director" to head the institute. The institute currently offers B. Des. Programs in Communication Design, Product Design, Fashion Communication and Fashion Design. In addition to this the institute also offers Bachelor of Fine Arts.

The interested person should be a qualified designer. Would be responsible for overall quality and execution of curriculum,infrastructure and day-to-day management of the institute.

He/She would also be responsible for running the "Symbiosis Design Cell" which is an in-house design office

of the institute. This cell offers design consultancy services to the industry and the corporate. Should ideally have an experience of 15 years or more. A combination of industry and academic experience would be added plus.

Interested may please send me a mail (with profile as attachment) on
director@symbiosisdesign.ac.in. All the applications should beaddressed to Dr. S. B. Mujumdar, President & Founder Director,
Symbiosis. Couriers can be sent on "Symbiosis, Senapati Bapat Road,
Pune 411 004.

Nitin Urdhwareshe (PD IDC 86)
Director
Symbiosis Institute of Design
Viman Nagar
Pune 411 016
Tel: +91 20 2663 4547 / 48 Fax: +91 20 2663 4549
Direct: +91 20 5661 3770

www.symbiosisdesign.ac.in

2.Axiom Consulting, in Bangalore, is looking out for model-makers, 0-5 years
experience, for a full-time job. The environment is a medium-sized
model-shop used for making models, mock-ups, prototypes etc.
Please do forward the contact of anyone who might be intersted puneet@axiomconsult.com
Thanks!
Puneet.
NID, PD
Axiom
Bangalore.

3 Vacancy: Interface Design in D E Shaw, India
Any one interested in the subject can apply to the attached offer documents.
Attachments:

Designer_ad_2006___NID.pdf (21k)
Designer_ad_2006_option_1.pdf (105k)

Thanks n regards
Aparajita

3. Hi!
   We are looking for people in our product design group.
   Here is the profile that would suit our requirements:

Qualification: Masters in Design from IIT B/ IIT D or Product Design from NID
Experience: 5-7 years in an automobile/ consumer industry, experience in Class 'A' surfacing of components
Skills: Good rendering & visualisation skills, analytical ability, knowledge about mass production processes like injection moulding, blow moulding, shet metal drawing etc.

Contact Person: Ms. Abha Garg, Asst. Mgr. HRD, Bajaj Auto Ltd., Akurdi, Pune -35
Tel: (020)27472851 Extn: 6609, mobile: 09890180382
Kindly pass this to the concerned as discussed at the
   earliest as we are in a hurry to close the vacancy.

   Thanks.
   Best Regards,

   Abha Garg
   Asst. Manager HRD
   Bajaj Auto Ltd.

   Akurdi, Pune -35
   Tel: (020) 27472851 Extn: 6609

4. Kern Communications is a full life-cycle usability consulting company in Hyderabad. Kern helps leading software product companies make their products useful and usable. Kern is known to combine deep understanding of users, business objectives, and technology to create innovative and pragmatic solutions.
   Kern requires three (3) full-time Usability Engineers for its growing team at Hyderabad.

   The person must have good understanding of:
   1. User research techniques
   2. Navigational structures
   3. Detail design / rapid prototyping

    4. Cognitive walk through, and
    5. Formative usability testing

The ideal person for the job would:
a. Have understanding of software development process
b. Be a graduate of IDC/NID or have Masters in HCI (or can demonstrate equivalent knowledge + work experience)
c. Have excellent communication skills in English
d. Have recently graduated or have up to one year of experience in HCI or related fields.

Please send your resume with appropriate portfolio to ripul@kern-comm.com