An interactive social platform on Indian streets

Project Duration: 4 months
Team : Sanjeev Shankar, John Vijay Abraham and Miheer Fyzee
Guides: Prof. Ravi Poovaiah and Dr. Ajanta Sen

Project carried out as part of the Product Interaction Design course at Indian Institute of Technology Bombay

Brief description

Walking down the busy **streets** in India is an experience of a lifetime. One gets fascinated by the sheer drama and emotion, which ultimately results in an engaging journey.

India has for long, thrived and survived on roadside vending. The social and economical dynamism, which this informal sector creates within the formal system, is absolutely indispensable. A highly flexible, informal and evolved group, they create a melting pot on the streets. Despite these tenets and their contribution to the system at large this group continues to be highly **marginalized**. On one hand there is some recognition of the indispensable service they provide; yet shockingly, they are also seen as a pestilence_ crowding pavements, spilling onto busy streets, not just a source of confusion and chaos but a source of filth and crime. Repeated eviction threats, ambiguous legal status and lack of networking are the underlying realities.

This project has attempted to see their lives; listen to their stories; observe their surroundings; understand their days and nights and finally respond to their needs. It has involved real users and incorporated their feedback to come up with an interactive **social platform**. This takes a fresh look at the relationship between roadside vendors and their customers. All this, while being rooted in their tradition, culture and shared imagery; using their skills and knowledge levels. It is a system level intervention, which has the potential to have multiple layers with wide ranging implications in the future.

Elaboration

Who?
Who are roadside vendors? These are people who sell products and services on the roadside.

Absences of brands, fixed prices and being constantly on the move are their defining physical attributes. Further, they are strongly rooted in their tradition and cultural background and help create a theatre for the senses on the roads.
What is the product or service being sold? Where is it being sold? What time is it being sold? How is it being sold? These are some of the questions we were initially faced with during our research. We finally decided to focus on the specific group of roadside vendors who sell consumable products. These are perishables … most likely fruits and vegetables. They are constantly on the move and are the main link in the supply chain for the entire Indian population.

Methodology
The scale and scope of this project was enormous. Our focus group was layered in every sense of the word. This necessitated a careful and sensitive approach right from start.

The first step was to follow a cooperative and participatory design process where we decided to work together to search, discuss, ideate, brainstorm and even body-storm so as to cross relate experiences and expertise. We involved the users in various stages of the design process. Observing them in action, conversing with them, showing them our ideas and getting feedback

was a critical factor for the final output. Doodles, sketches, diagrams, mind maps, use of metaphors, making prototypes, enacting the scenarios, simulations on flash and constant discussion with people working in similar areas were some of the tools used throughout this journey.

Initially, a lot of emphasis was laid on problem identification and familiarization. Also, since we were designing a social product for the community, the humanization of the product environment was critical. We realized that senses played a key role in their lifestyle. Creation of a wish list and persona of the user were sources of our reality check; constantly bringing us back to the discussion table.

We came up with the keywords of ordering, sharing and remembering for this group. Ordering or structuring would constitute the physical, existential requirements of their enterprise: from sourcing and stocking of goods to selling them to customers. Sharing would constitute the exchange of views and news, story telling, sharing experiences, life philosophies and punch lines. Finally, remembering would cater to recollecting the prices of goods or bringing back memories of home and their villages.

Understanding the user and environment was the key to the process. This involved various factors:

        Physical factors (shape, form, smell, color, texture and sounds)
        Organizing factors (links, flow, structure, activities and interaction)
        Semantic factors (expression, meaning, content, feeling, macro and micro view)
        Functional factors (to inform, direct, warn; educational, recreational, emotional and promotional)
        Influencing factors (cultural factors, aesthetics, trends, human factors and usability)

Apart from this, we developed an understanding of the technological input required to make our vision a reality.

Case studies

We interacted with a wide spectrum of roadside vendors. When it comes to products the range was mind boggling.. From sugarcane and fresh juice to shoes, toys, clothes, electronic goods to jewellery. On the other hand their counterparts providing services were as colorful and varied.. From shoe shining and watch repair to hair cuts, tattooing, knife sharpening to stitching and shoe repair.

One such person was Vir Singh. He has been selling dry fruits from the same spot in Bombay for the last 42 years. He personified the image of a larger than life figure. The wrinkled, weathered look; timeless, regionalized features and mature expression resulted in the most engaging conversation we have ever had. He has been following the same routine for all these years along with his wife and eight kids who are also in this profession. He had his own efficient and professional way of doing business but with a human touch.

What makes them special?

This is a highly evolved, charged and sophisticated group. An informal, free flowing, genuine and natural approach creates a fertile ground for easy and emotional bonding. They are well and truly indispensable and the dramatic setting, which they create, has significant family resemblance. As a system they meet their goals and show a high degree of professionalism but with a human touch.

Inspiration and Purpose

Through the course of our journey we realized that_ ' **Theatre of the senses '** was an apt metaphor for roadside vending. From sounds and smells to color, texture and vibrancy of animated expressions.. All of it added up to a heady mix … where customers happily gave in to the temptation. With every vendor coming from a different cultural context… the variety only enriched the experience. We on our part wanted these vendors to grow and become more

responsible for themselves and their families. We also realized the need to make their process more efficient and effective; apart from encouraging further interaction and reinforcing the feeling of community and of a larger family. We wanted to focus on the power of shared stories, experiences and thoughts.

Concepts

Our concepts looked at designing efficient workspaces; new display systems; creating an automatic check and balance system; using sound, color and fragrances to activate a system; creating a game based on religious story boards and using bamboo weaves and jute_ two common materials used by roadside vendors to come up with an interactive product.

Final concept: Darpan_ a mirror

The product is called 'Darpan' which means 'a mirror' in the hindi language. An interactive social platform for Indian streets, it combines the aspirations of roadside vendors with their real needs.

We found that attention seeking and deal striking were the two main concerns of this group: as they reasoned that ultimately they needed the money for survival at a daily level. The main purpose of our product is to address these two issues.
We also found that religion and cinema plays a big role in their lives. Each state in India has a unique cinematic history and style, with the stars being emulated by each and every viewer. Infact, litho posters of movies are a critical part of contemporary Indian streetscape. This influence was clearly seen in the way our focus group interacted with the customers, the punch lines they used and also the way they dressed. This was a key observation and contributed immensely to the final output.

'Darpan' has tried to marry these two observations and created an interactive system, which has other features like archiving, real time information about stock status, position of the vendor, pricing and personalized info about the vendor, recepies for housewives during festivals, information about calorie content, patterns for 'rangoli', which is a traditional Indian art form, where people create patterns on the floor using natural materials during festivals. These are some of the features, which the system can have.

Let us see how this product really works by simulating a scenario. Kanta Bai is a 36-year-old traditional and respectful lady with a 12-year-old son. She sells green leafy vegetables on the roadside. Her husband also does similar business. Her day begins at 5 am when she spends two hours to source goods at the lowest price. The entire day is spent away from home in the hot sun, trying to grab the attention of passer by's and striking a deal. Her son joins her after school hours. During non-peak hours, relaxation becomes a big issue. Eviction threats are a big problem too. Her day finally ends at 9:30 pm.

Now let us see how her life changes with the addition of 'Darpan'_, which is a flexible screen, made of bamboo strips and jute cloth. The screen can be hung from any framework and can also double up as a shade in the hot Indian summer. It can be activated by both audio input and tactile input.
As a potential customer walks by, his image is captured, converted into an animation and generated on the screen in a local cinematic style. This immediately grabs his attention and draws him into a conversation with Kanta bai. During the course of interacting with the screen, he's exposed to other features of the system. One of these is an interactive real time map at a zoomed out macro level. This updates him about nearby vendors and his position with respect to them. Now as he gives a tactile input, he can access information about the vendor, stock status, prices and their specialty. Another feature is a directory of recipes for different snacks, sweets or food items. Now, since each state in India has unique culinary styles, the vendor would decide the type of recipes. This makes perfect business sense too as the focus would most certainly be on the products which the vendor is selling (green leafy vegetables in this case) and her origin as well. Further, it would also result in networking as the customer is bound to go to the next vendor

to complete the list of ingredients needed. This feature could be of immense help to housewives who are always under pressure to churn out new recipes everyday.

Another feature, which could transform into the default need of the customer, could be a directory, which shows the calorie content of the products being sold. Further, during festivals, customers look for sweet recipes; new patterns for 'rangoli'_ which is the art of painting designs in front of homes during the festivals; new combinations for creating a great ambience during 'diwali' _ a festival of lights. We can also have live cricket broadcast, as the sport is now no less than a religion in India.

From the vendors perspective too this system has tremendous potential. Accessing the stock status, lowest prices and striking deals with the wholesale market would be done in a much more efficient manner using the interactive maps. When installed in the public realm, new vendors coming from nearby villages would access the map to see the concentration of different type of vendors in different zones. They would then propose their need to join them or move over to other zones. This would go a long way in resolving the conflict between old and new vendors.

At a larger system level, such an intervention gives legitimacy to roadside vendors; reduces exploitation; creates strong communities and unites everyone.

Technology

Technologically, the system would need input from luminex flexible displays and touchlight interfaces. These would mainly be the back up support systems for visual display, interaction and inputs in the form of sound or tactile means.

Further, a wireless LAN would enable wireless network, storage; location tracking and reporting.

User feedback

After making the prototypes we spent sufficient time with the users and tried to understand their concerns. Nearly all of them loved the role of cinema, the fact that it was made of bamboo strips and jute and hence did not look too sophisticated. Since it merged with their current context, they took an instant liking for the solution and confessed that their neighbors might want to steal it. However they were worried about the cost factor and if it was durable and easy to pack.

Future

This system could become a huge success in the public realm and have many other layers built into it. For a start, we could have a public way finding navigation system integrated with the interactive map. This would be of immense help to tourists, who are constantly nervous about loosing their way. It could become a forum at the community level to share news, views and stories. It could also double up as a source of revenue through advertisements at community level. We can have resolution of legal issues too. In other words it could get elevated as a platform for empowering people and letting them take decisions. Such a system would bring in much needed transparency in the Indian system.

Acknowledgements

We would like to thank all the roadside vendors and their families we spent time with; especially Vir Singh and Kanta Bai for their selfless portrayal and baring of emotions. They were the real heroes of this unique journey. We would also like to thank Prof. Malshe; Mr. John Thakara; Prof. Debra Solomon; Ar. Benjamin Solomon; Dr. Amrit srinivasan; Prof. Jatin Bhatt; Mr. Bhaskar Chandavarkar and the countless people we interviewed all along.