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The Design of a Tribal Tabletop

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Abstract

The past few years, companies marketing strategies integrated the use of the new technologies as a marketing tool to enhance the sales. The advance in novel innovative user interfaces would now allow to expand the use of 3D simulation. Such innovative marketing tool in a store helps the customer to imagine quite realistically herself with the product in the future. In this paper, we present the hardware design of a new marketing tool based on tabletop in a sales situation. We take into account the situation, geometry and space arrangement of the store. We place the users, salesman/woman and customers, in the centre of our design to propose a tabletop that promotes users collaboration in this professional context.

1. Introduction

During recent years, companies marketing strategies integrated the use of the new technologies as a marketing tool to enhance the sales. For example, operational marketing set up marketing tools on the World Wide Web for the brand image of the company or as a place for sales with user accounts. Advances in novel innovative user interfaces would now allow the spreading of 3D simulations as a marketing tool in stores. The aim is to help the customer to imagine quite realistically herself with the product in the future. It allows convincing the customer more easily.

We focus on sales in swimming pools store. The decision of buying such a type of product is rarely impulsive. The company which makes the product must manage to convince the customer for the long term. This type of product is still sold with contact conditions, in a dedicated store. Six phases are usually observed for traditional sales in a shop with the consultative selling technique [2]. 1. Getting in touch with the customer. 2. Searching for her needs, desires and motivations. 3. Demonstrating the product with the help of a precise and personalized argumentation, in order to highlight the qualities and the performance of both the products and the company. 4. Answering contestations and objections of the customer. 5. Concluding, i.e. bringing the customer to the act of buying. 6. Fixing the steady modalities in order to establish the customer's loyalty. Peoples from the operational marketing would like the use of novel technologies to appear since the step 3, employing 3D simulations of the product for demonstration. The step 3 assumes a set of arguments on the product that fit to the personality of the customer.

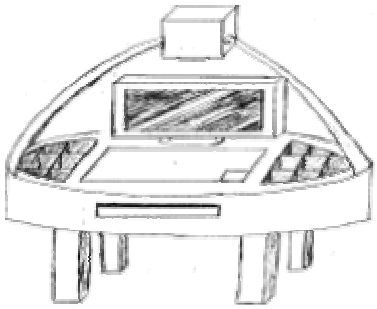

Figure 1. Sketching of the circle table shape

In following we present at first the design method we followed, and then the results of our design. We focus on the table shape: a three-branched, throwing star-like shape (that we call "Tribal shape") that we compare to a more classical circle shape. To conclude we list characteristics of the designed tribal tabletop.

2. Design method

Following classical process in innovative product design we obtained the functional specifications of our proposed tabletop. The process is APTE method, brainstorming, functional specification and fast diagram making. The main sale arguments followed during the process are: the brand image and the fame of the company which makes the product, the technical qualities of the product, its quality of use, merchandizing and price qualities, the comparative qualities of the product against the competitor products, the references of the product to sale, the services which entitle the product to sale.

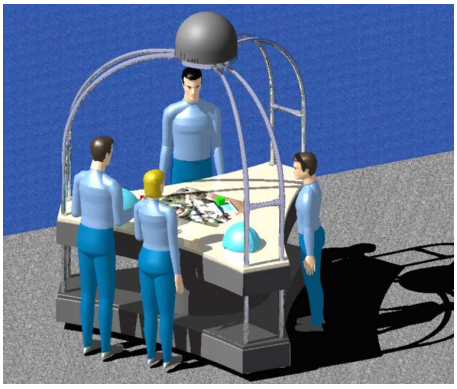

Figure 2. Tribal tabletop in situation (*Catia v5*)

3. Design results

With a cascade development cycle and using the CAD software *Catia v5*, we obtain two principal designs for our tabletop, taking attention of situation, geometry, and space arrangement of classical store. We suggest a tabletop with vertical flat TV screens, horizontal video-projection and storage on the table. Two shapes are studied: circle shape and tribal shape.
The comparison of the sides, between circle shape (see Figure 1) and tribal shape (see Figure 2) offer an important similarity concerning the situation of the actors: both shapes prevent the implicit designation of a leader. Comparatively to the circular shape though, the tribal shape, with its convex lines, improves the involvement of each actor. The tribal table allows symmetry of the actors during the simulation, and gives to each one a side: for the vendor, and two for the customers. The tribal table is playful and friendly, and offers a centered collaborative space with personal spaces at the extremities. Curving form of the sides was retained for its non aggressive aspect, not dangerous and refined. Moreover, three flat screens must be added on each branch of the arch-shaped frame in order to obtain a perfect symmetry, and to allow watching the simulation from the three table sides. This table shape we can characterize as innovative permits to avoid opposed vis-à-vis situations.

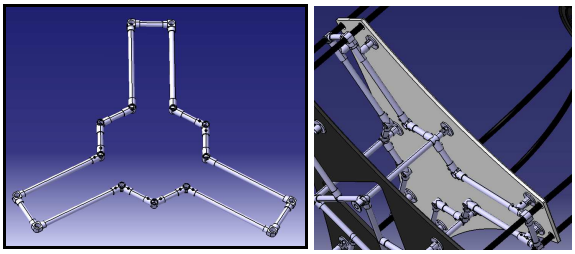

Figure 3. Skeleton model and the fixing of the skeleton under the table (*Catia v5*)

The structure of the table is based on a skeleton of tubes and connections (see Figure 3). Using 120° connections, we increase the rigidity of the structure and the frames are closer to the center of the table. We create an arch with a dome at the top to fix the video-projector and hide it. This solution was inspired from a church keystone architecture, to distribute the forces that hold the dome. Nine feet hold the table, two at each extremity, and three at the center. The structure is hyperstatic, and the weight is well distributed. Three central bars, fixed as down as possible, reinforce the structure making the center of gravity lower. We advocate aluminium for tubes, alloy of aluminium and stainless steel for tubes connections, plywood for tables, alloy of aluminium for the keystones and finally, plastic alloy for the dome, the storages and borders.

4. Conclusion

The sale of a product such as a swimming pool requires the presence of several participants: the sales representative and the customers. A 3D simulation of the product on tabletop would help, during the vendor argumentation, to show concretely the performances of the company, and to start to build the draft of a product adapted to the needs of the customer. It would also help the customer imagine quite realistically herself with the product in the future, making it easier to convince the customer. Then such a marketing tool allows to convince the customers easily. We designed a tabletop with tribal shape that serves marketing strategies (Figure 2). The characteristics of the designed tribal tabletop are as follow. The mass is 172kg. The height is 2.50 m. The bigger width is 2.20 m. The hardware cost is estimated to 4 k€ (6.3 k$). Nine persons are allowed around this tribal tabletop. To go on a sale show, the tabletop can be dismantled or assembled, by three persons, in half a day. As future work, we look forward to build it in collaboration with an industrial group and design the software part of the tabletop to present and control the 3D virtual environment [1]. We also plan user studies to compare with circle shape. Thanks to J. Ryst, E. Yildiz and V. Chatel, our master students who designed the tribal table using Catia v5.

6. References

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