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Resumen de Comunicación

Digital graphic representation in Fashion Companies

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The clothing business demands agility, which is a fundamental factor for the companies to survive in the market. It is known that the micro and small firms undertake all their efforts to survive through each season, seeking to keep its pace in accordance to the latest trends and tendencies. In this process, the technical drawing is applied as a way to express ideas and proposals from the fashion designer towards new products.

This work brings the results and its nuances from the research conducted in the clothing segment to verify the situation of this important work tool, and the points that need immediate improvement to reach real gains in productivity.

Introduction

The use of informatics has been expanding during the last few decades into a deep range of applications within clothing and textile companies. From graphic computing destinated to the elaboration of fashion illustration and technical fashion drawings, to printing compositions, not to mention the use of CAD and CAM systems applied to the conceptual process as well as to the making of new products. Technology has paved the way for new methods and work techniques and also has influenced the repositioning of brands in the market through productivity gains, based on the assessment of their corporative values that thrust the remodeling of their images to the consumer market.

The core objective of this work in progress is to investigate how clothing companies compose their graphic representation, as well as their difficulties and priorities regarding this important tool used by the designer to communicate his projects in an efficient way. Nowadays, the number of small and micro companies without access to CAD softwares is considerable, due to its high cost. That difficults the implementation of informatics within these companies can cause their instability in the market, due to their fragile production capabilities, lack of agility and solid information structures. According to a research carried out by SEBRAE – Brazilian Support Services to the Micro and Small Firms, the high failure index among the smaller companies is a matter of worry, revealing that it happens 49,9% stop to work within the first two years of existence; reaching 56,4% on the third year and 59,9% on the fourth. The high failure index has well-defined causes, and from those we can find: the unequal competition conditions, the unknowledge of management techniques throughout the principles of design; the inappropriate taxing treatment; and the absence of credit.

The methodology applied in this investigation and its main results are presented as follows.

Methodology Applied

A databank of the target companies in this research was carried following a bibliographical analysis referencing to the area. The intended universe has focused either on micro and small clothing companies based in Brazil and Portugal. According Burke (2006, p. 11), the computer softwares of graphical applications have been integrated to Fashion Design for the creation of technical drawings, on the purpose of bringing agility to the production process. Moreover, there is the possibility to set standards for all visual communication within Marketing and Production areas within clothing industries. On the verge of this continuous integration between computer graphics and Fashion, there has been the necessity to research companies with a pre-established profile. The objectives of this research centered in the knowledge of the specific impact caused by graphic softwares inside clothing industries: its applicability, advantages and disadvantages in the production process, and the most relevant factors on acquiring these computing systems.

The elaboration of the research tool was carefully planned and exhaustively revised, in order to allow its initial appliance through digital means. In order to achieve such a result, special methods of digital questioning were studied that could be quickly completed by the interviewed through the use of ActiveX Controls². The process of question-answer was elected for this to allow a greater range of companies to be assessed, as well as to bring out the possibility to reconstitute its development path, in case it is needed.

Foddy (1996, p. 11) citing Cicourel, Briggs and Phillips, considers that the situations inquiring question-answer "are far more complex than it is generally supposed". And exactly those were the reflections that led the formulation of the research tool, so that it would be in conformity with the four stages to be accomplished within the process of question-answer, according to Foddy (1996, p. 18):

- The inquirer must be clear regarding the nature of the desired information and properly express his question.
- The interviewed must decode de question within the same terms intended by the inquirer.
- The interviewed must generate an answer that contains the information desired by the inquired.
- The inquirer must decode the answer within the terms intended by the interviewed.

The mentioned author warns that the question-answer process demands patience in each of these levels, in order to obey the fundamental standards that guide the investigation based on questionnaires, as follows:

- The inquirer must clearly define what is the desired information
- Those interviewed must possess this information

- Those interviewed may grant access to the desired information according to the contexts of the questioning.

According to all the criteria within the bibliographical output, the research tool of the formation process was meticulously elaborated, revised and then approved for the next stage where it would be tested. A pre-test of the research tool was made, on a small sample of the target population, in order to test the questions under their interpretation, as well as verify whether the dynamic pages created are both interactive and applicable.

Instrumental application

Following the adjustments made in the pre-test stage, the tool was directed to the target-population of the research project. The sample of the investigation has focused on Brazilian and Portuguese clothing companies, selected according to the pre-established target-profile. Burgess (1996, p. 236) claims that a particular care must be taken during the analysis of the collected data, in order to pay attention to some links between "theory and information, the theoretical perspective in use and the influence it had ever the selected data to figure in the investigation report". In steps lightened by the aforementioned author, all data was collected and processed following careful analysis that will serve as base for the development of the works and the flourishing of proposals yet to be presented in this area. Thirty small and micro firms of clothing were investigated.

Results Collected

The great majority of the companies (82%) use digital environment to graphically represent their collections. From those, 39% have been using it for more than 5 years, 22% have been using it since 1 to 3 years ago, and 14% for less than a year.

Among the softwares the CorelDraw is the most used (38%) followed by Adobe Photoshop (24%). The Lectra Systemes comes next position, along with 13% of the companies on this survey. The Audaces has reached 11% and the Gerber comes in the 5th position with 5% of the votes. There were mentions to other softwares, such as the Free Hand and Corel PhotoPaint, with 7% of the votes. From that analysis we can conclude that there is preference towards the use of general-purpose softwares instead of those of specific focus, where the most used softwares are able to deal with images from different sources, vectors and bitmaps.
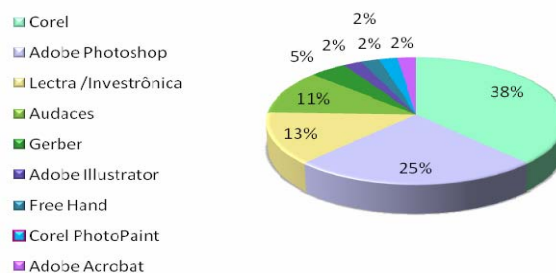

Graphic 01: the most used softwares in fashion companies

The reasons of choice

The reasons by which the companies choose their software were established according to levels of relevance. Both *agility and precision* (64%) were elected as the most important by the companies. The *cost* of the software was second with 57%, followed by the *operational easiness* in third with 56%. Other factors also mentioned by companies as relevant in the acquisition of a software were: *integration with other softwares already implemented* (50% of the companies considered this as a highly important issue); and the *wide range of tools* was mentioned by 36% of the companies.

At last, the most irrelevant element considered on the acquisition of software was the *interface quality*. The researched companies have also cited other aspects in small numbers, such as: *user training*; *implementation easiness*; *display color accuracy; presentation tools for collections and results* achieved by the companie's design department.
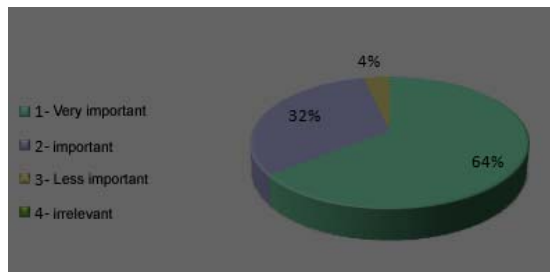

Graphic 02: agility and accuracy

57% of the companies are satisfied with the production of their technical drawing, considering just a few issues. On the other hand, 39% are not satisfied, and 5% did not answer of had not a defined position about it.

What the companies consider as points of improvement

Among the aspects yet to be perfected in graphical representation, the *presentation* occupies 18% on the concerns of creative sectors, in the same amount as the *clarity of details exhibited*. The *tracing quality* was cited by 11% of the companies as subject to improvements, as well as the material and texture simulation on technical drawing. Due to imperfections on graphical representations, there are many flaws in the habitual work process in the companies.

These deficiencies were researched and classified according to their frequency and intensity. From all those listed, the *delay during the conception processes of new drawings* was the most frequent in the companies and the approved drawings catalogue or digital flat drawings libraries have not been occurred in 24%. Otherwise *the absence of standard technical drawings* was mentioned by 15% of the firms how quite frequent, as well *the insufficient specifications* occurs in 11% and with medium frequency in 33% of all the sample.

The difficult communication between the designers and the pattern team is a rare fault according to 41% of companies or it has never occurred in 31% of them. *The limitation of resources and tools presented by the softwares* causes problems with moderate frequency in 44% of researched companies. Others faults had been commented like the size of documents and softwares what consequently requires more time to be processed.
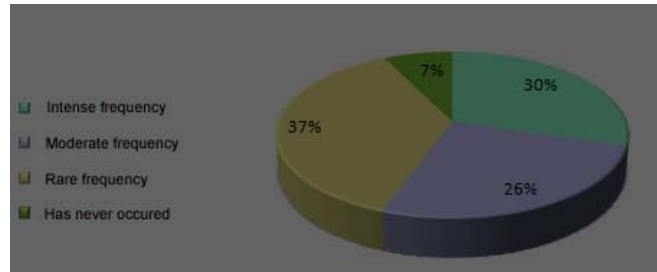
Graphic 03: new technical fashion drawings can take a long time to be done.

The most important tools

The tool groups were researched in order to evaluate which one of them effectively makes the difference for their users. The group considers as the most important was the *lines, dots and curve editing*, by 82% of the companies; *the visualization effects and the simulation of textures, washings, embroideries and other finishing* obtained 76%; in third came the *color balance features*, classified as third with 71% of citations as being of extreme relevance. The assembling of model libraries is considered extremely important by 58% of the inquired companies, followed by the ability to specify *technical details* (47%); *the customization of shortcut keys* (41%); *wide interface comprising many file formats* (37%); satisfactory quantity of pre-made shapes (29%); and *tridimensional effects* (27%).

Conclusions

The obtained results reveal and reinforce at the same time notorious difficulties in the process of design creation. As a mainstream tool of communication for the designer to technically expose his creations, the technical drawing can be assembled in many different ways and the choices made by the companies towards it will lead to appropriate solutions for the question. That is not a simple matter to solve, considering the choice of software, since their users need a fair amount of time, adequate resources and good formation to adapt themselves to the program adopted by the company. In many cases that is not possible, because the search for being competitive in the fashion market demands the work to be done faster and better each new season.

The difficults indicated by the research presents typical problems of digital means such as the size of documents and softwares, update hardware and *delay during the conception processes* of new technical drawings as well the cataloguing and reutilization of models and basic draws conceived previously. It was evidenced the difficult in show the design specifications through technical fashion drawings which can

be solved by the training improvement of designers in how to apply correctly the digital tools to perfect the communication quality. This is essential to give agility to design process.

The future research has already brought essential elements to create a using method of available digital devices to fashion companies supported by a multimedia application in development. The main objective of this work is investigating the methods to create technical fashion drawings and improve the gains achieved by the micro and small firms and improve the digital fashion graphic representation techniques.

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