

Drawing in Digital Platforms: A study about the buildings of Eduardo Souto de Moura and Eduardo de Almeida

Gabriel Braulio Botasso
Instituto de Arquitetura e Urbanismo
Universidade de São Paulo
Av. Trabalhador São Carlense, 400, São Carlos
São Paulo, Brazil
gabrielbotassousp@gmail.com

Simone Helena Tanoue Vizioli
Instituto de Arquitetura e Urbanismo
Universidade de São Paulo
Av. Trabalhador São Carlense, 400, São Carlos
São Paulo, Brazil
simonehvtv@sc.usp.br

1. INTRODUCTION

Many researchers studied what is the drawing and what their relationships with human thinking, their cognitive capacity and, above all, the aid in improving the perceptual capabilities (including Merleau-Ponty and Herbert). Relationships derived from ancient times, dating back to the first traces, still enrolled in the caves as a form of memories record, of great achievements.

This relationship between man and space has changed significantly, today we live in a profusely virtual world. Its consequences reached the Architecture and changed the projective approaches - the architects incorporated the digital tools in the creative processes. This research aims to discuss the advantages of integration between the freehand drawing and the new technologies for the study of the buildings of the architects Eduardo Souto de Moura and Eduardo de Almeida.

2. THE USE OF TABLETS IN ARCHITECTURE

2.1 Tablets

Although there since the second half of the twentieth century, it was in the 80s that the computational tools have become devices marketed in large-scale in architectural environment. According Vizioli and Silva (2013), since the decade of 1980 the digital tools and CAD programs pass to be used mainly in the execution of technical drawings. During this period, the aid programs to drawing have multiplied and become part of the daily lives of architects, making the methods of design in architecture suffer modifications. The architecture schools restructured their methodological basis,

incorporating such issues – computer programs have become part of the creative process.

A blend of analog drawing and digital drawing is what the current *tablets* bring as proposed, since it can draw freehand on a surface different of the paper. Thus, the free hand drawing in the design process is recalled: according Castral and Vizioli (2011), the *tablets* started around the 1960s, but only the current *tablets* present innovations for the recognition of the sensations of touch, distinguishing the force used in the support and the lightness of the dash, with which you can redeem the features of the freehand drawing, now reworked by this resource.

In addition to issues relating to the recognition of pressure and its speed, which gives identity to the drawings (even in digital platform) the *tablet* can be easily transported and used as photographic recording instrument and subsequently as a way to draw on the photography.

The drawings are made in layers, each with a different study, which can be superimposed, creating a link between readings of the same process. There is the possibility to work also with the issue of transparency, highlighting one or more layers in relation to others. As the drawings are already scanned can be send to email, saved through cloud storage or simply stored on the device, which preserves the original always intact and don't deteriorate with time.

In addition to the most popular programs of image editing as *Adobe Photoshop*, you can draw and merge overlap in specific programs (such as *Sketchbook Pro* and *Paper 53*), with a variety of brushes, pens and other markers in addition to the vast color circle.

2.2 Reading projects with the use of tablets

In this context, we propose the use of *tablets* in the analysis of architectural projects, and this work will illustrate such an approach based in the architects Eduardo Souto de Moura and Eduardo de Almeida. The technical procedure used to show characteristics of the works was based on graphical annotations on drawings and photographs of this works, which was done with the use of *tablets* in different layers, without interfering in the authorship of materials.

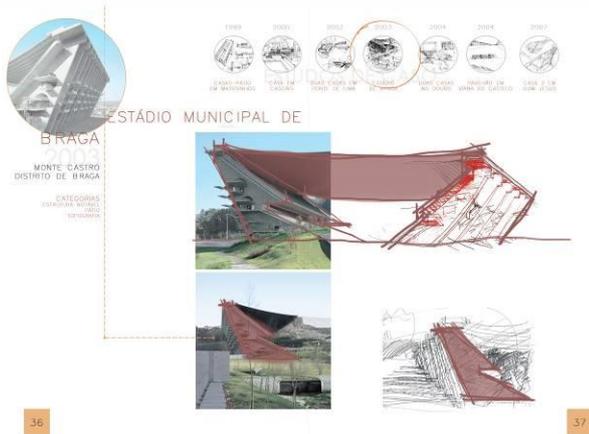


Figure 1: Studies about the Estádio Municipal de Braga (2003) made with the tablets.

In the above example (Figure 1), important features of the Estádio Municipal de Braga (2000-2003) that were already present at the time of its creation were highlighted by graphic comments on the original drawings (*sketches*). Through the graphical annotations is possible see that Eduardo Souto de Moura¹ already presented in their *sketches* issues about the building, as the proportion and design of large concrete blades carved into the rock of Monte Castro, for example.

In the following image (Figure 2), note that the graphics highlights made with the use of *tablets* could demonstrate the constructive aspect of the domes covering the Residência Pedro Tassinari (Eduardo de Almeida, 1965): the bottom made bow ceramic brick, which is associated with concrete beams on the sides and a covering on top. Can also see how the structural rhythm that your module of 3.70 meters interfered in the internal distribution of environments.

Other aspects can also be highlighted using the tablet for reading projects: in the Almeida projects²,

¹ The book with all studies of the works of Souto de Moura can be accessed at this link: http://issuu.com/gabrielbotasso/docs/0_caderno2_final.

² The book with all studies of the works of Eduardo de Almeida can be accessed at this link: <http://issuu.com/gabrielbotasso/docs/output>.

for example, were studied questions as the relationship between full and empty; sectorization (one of its main characteristics); constructive details of parts could be better understood; visual and structural axes; access and circulation, among others. When highlighted, these elements provide a clear and didactic reading about the projects.

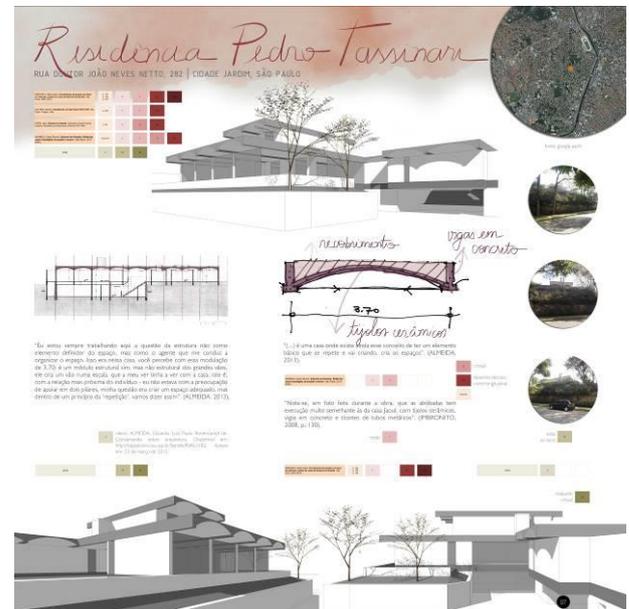


Figure 2: Studies about the Residência Pedro Tassinari (1965) made with the tablets.

This work goes beyond a simple support change (from paper to digital screen): it indicates the possibility of a synergy between two logics of spellings. Thus, the very mechanical process of the *software* may be filled by the freehand drawing immediacy, and this can be enhanced through digital editions.

3. REFERENCES

- Castral, P. and Vizioli, S. (2011) O desenho à mão-livre mediado pela tablete. In *SIGraDi proceedings*. FADU-UNL, Santa Fé, Argentina.
- Herbert, D. (1993) *Architectural Study Drawings*. Van Nostrand Reinhold, New York.
- Merleau-Ponty, M. (1994) *Fenomenologia da percepção*. Martins Fontes, São Paulo, Brazil.
- Seguí, J. (2007) Edificación, arquitectura, enseñanza de la arquitectura, modelización y dibujo. *EGA – Expresión gráfica arquitectónica*, n. 12. Universidad Politecnica de Valencia, Valencia.
- Vizioli, S. and Silva, I. (2013) Ensino de Arquitetura e Urbanismo com auxílio de ferramentas digitais. In *SIGraDi proceedings*. Universidad Tecnica Federico Santa María, Valparaíso, Chile.