

Author: Marcos Cruz of marcosandmarjan
Research Output 1: *75th Lisbon Book Fair*

Co-Author: Marjan Colletti

Output Type: Design

Building: Temporary Pavilion for the 75th Lisbon Book Fair

Function: Temporary Auditorium, self-service café, information pavilion

Location: Lisbon, Portugal

Date: 2005

300 Word Summary

The Pavilion of the 75th Lisbon Book Fair (2005), comprises the design and construction of a temporary pavilion for an auditorium (150 people), a self-service cafeteria, and a separate information pavilion.

Questions

- (1) How to use the programme and site impositions to create a low-tech yet sophisticated and highly experiential public building?
- (2) How to utilize digital modelling and manufacturing technologies within an extremely tight budget and construction schedule?

Aims/Objectives

- (1) To enhance the topographic and panoramic experience of the site through the building. The auditorium and cafeteria create an amphitheatre-like zone, thus exposing the auditorium's cultural activities while at the same time appreciating the city view.
- (2) To maximize CAD and CAD/CAM technologies during the design process (six weeks) in order to build the 1,000m² pavilion in the shortest time (four weeks).
- (3) To conceive a sustainable design in line with the temporary nature of the building.

Contexts

The building can be understood in the line of contemporary investigations in which highly innovative digital technologies in the design process are applied to extremely low-tech and cheap construction techniques (below €400,000), for example scaffolding with laser-cut mdf cladding.

Methods

The research involved the testing of various programmatic solutions and different site locations; extensive 3D computer modelling and visualizations and their application to a recyclable metal scaffolding and laser-cut MDF cladding.

Dissemination/ Esteem

Exhibitions featuring the work include: Habitar Portugal, Lisbon, 2006; the Royal Academy Summer Exhibition, London, 2006.

Major articles and highly positive reviews in international magazines include *Costruire* (cover), *Jornal Público*, *JA Jornal Arquitectos*, *Arq./a* (2005).

Featured in Portuguese newspapers: *Independente*, *Jornal de Notícias and Diário de Notícias* (25 May 2005), *Expresso* (21 May 2005) and *Agenda LX*.

Authorship

As part of the joint architectural practice marcosandmarjan, Cruz and Colletti both contribute equally to the research.



Image 1
Aerial view of Lisbon with Parque
Eduardo VII and collage of
intervention.

General Description

The project was the centrepiece of the 75th Book Fair, which is located every year on the highest point of the *Parque Eduardo VII* in Lisbon. (image 1) The park, built in 1943, is a protected area within the city, standing out for its clear geometric layout, inclined topography, points of perspective and extraordinary views over the city. This created an ideal setting for the building sited on the north-western edge of the park, projecting its main volume into the most exposed area of the central grass meadows. (image 2)

The building was a low-budget temporary construction that included two independent structures: an auditorium for a minimum of 150 people linked to a self-service cafeteria, and a separate information pavilion. Unlike in previous years, the proposal combined the auditorium and the cafeteria through a large outdoor staircase, which allowed the seating area of both cafeteria and auditorium to be extended outside. (image 3) This solution created an amphitheatre-like condition that permitted users to experience the cultural activities in the auditorium from the outside while using the cafeteria, and at the same time to appreciate the vistas of the city through a large window behind the stage inside. (image 4)



Image 2
View of auditorium volume
projected onto the central grass
meadow of the park.

Research Questions

The fundamental question for this design was: How to find ways of using the programme, site and budget impositions to create a low-tech yet sophisticated and highly experiential building? From that exploration a further question emerged: How to utilize digital modelling and manufacturing technologies to create such public infrastructure within an extremely tight budget and construction schedule?



Image 3
View from inside the auditorium
towards cafeteria with occupied
staircases.

Aims/Objectives

The first objective was to enhance the topographic and panoramic experience of the site through the placement of the building. The second objective was to maximize CAD and CAD/CAM technologies during the design process (six weeks) in order to build this 1000sqm pavilion in the shortest time possible (four weeks). The third objective was to conceive of a sustainable design in line with the temporary nature of the pavilion, one which would not damage the protected vegetation of the park, and would use materials that could be reutilized in other constructions.



Image 4
View from inside the auditorium
of Lisbon (with castle in the
background) through stage
window.

Context

The proposal for the 75th Book Fair can be understood in relation to other contemporary investigations in which highly innovative technologies are used in the design process (CAD and CAD/CAM) and applied to extremely low-tech and cheap construction techniques (total budget of €400,000). This process allowed the project to be conceived in just six weeks, including the detailing stage, and fully assembled in four weeks.

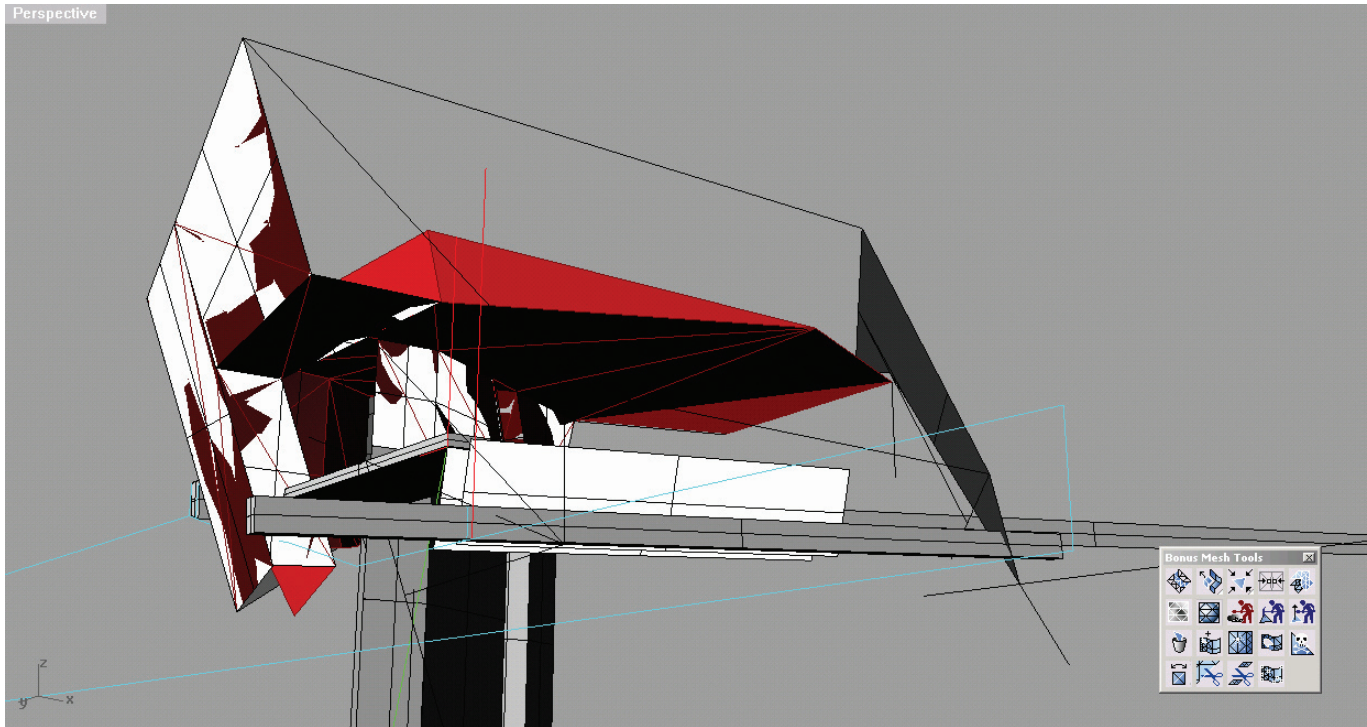


Image 5
Computer model 1.

Research Methods

Several visits were made to the site in order to understand its inherent complexity and potential. Concurrently a variety of programmatic solutions, different site locations and experiments into the relationship between the three-dimensional complexity of the building and its surrounding topography were tested through extensive 3D computer modelling and visualizations. This in turn allowed the overall shape of the building, its accessibility and functional viability, the light conditions and colouration to be refined. (images 5–6) These computer models were constructed with the same logic as the real construction on site, and were regularly and quickly updated throughout the whole process. (images 7–9) As a result of the low budget and the temporary nature of the building, as well as the speed of construction required, and the impossibility of using foundations, an internal recyclable metal scaffolding and mdf cladding for the façades (image 10) were chosen as the main construction materials/systems. A series of mdf panels were laser-cut with the logo of the exhibition through which light was projected from behind, while the negative shapes of these letters were applied in other areas of the façade.



Image 6
Final construction of auditorium.

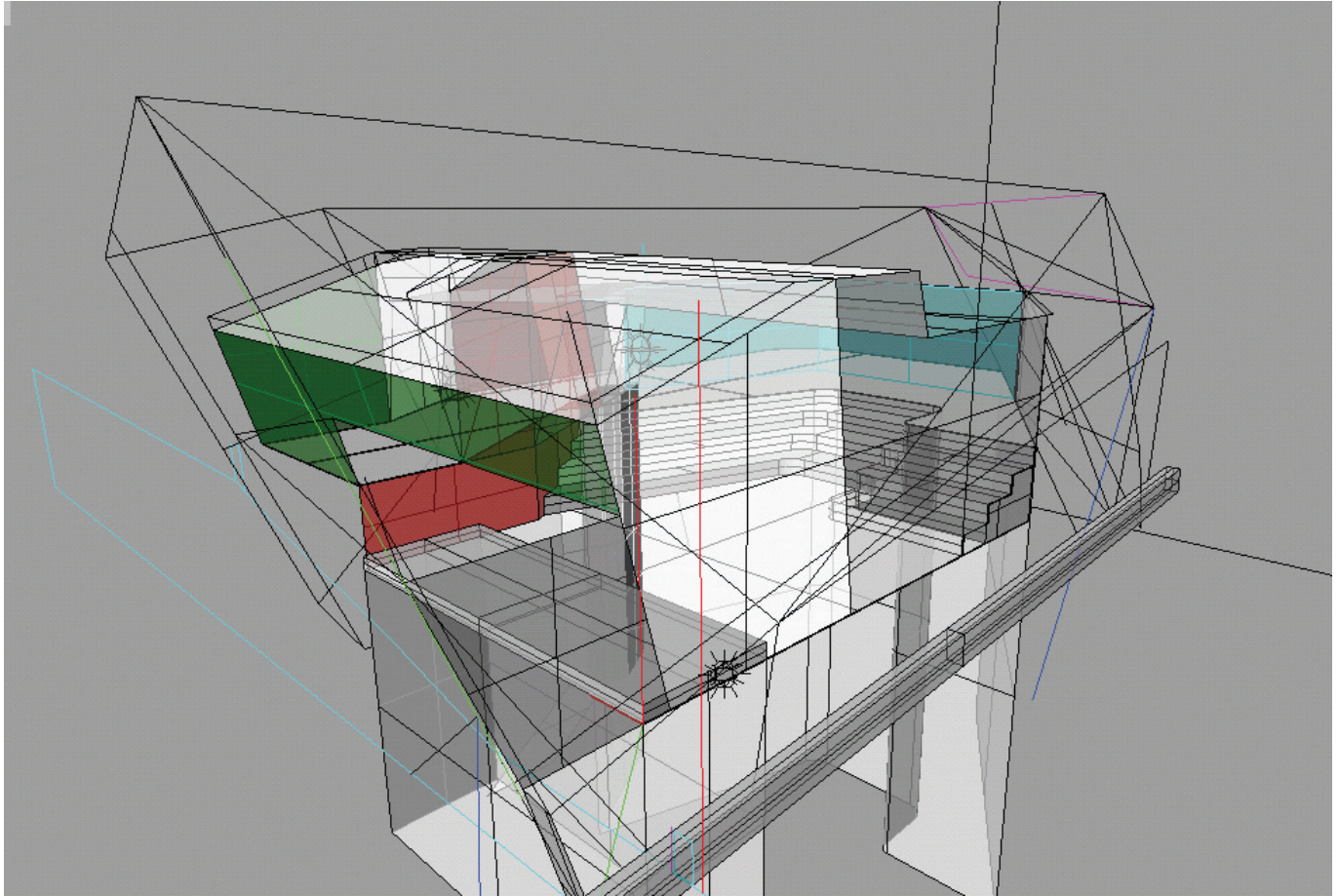


Image 7
Computer model 2 with three-dimensional reference in space.

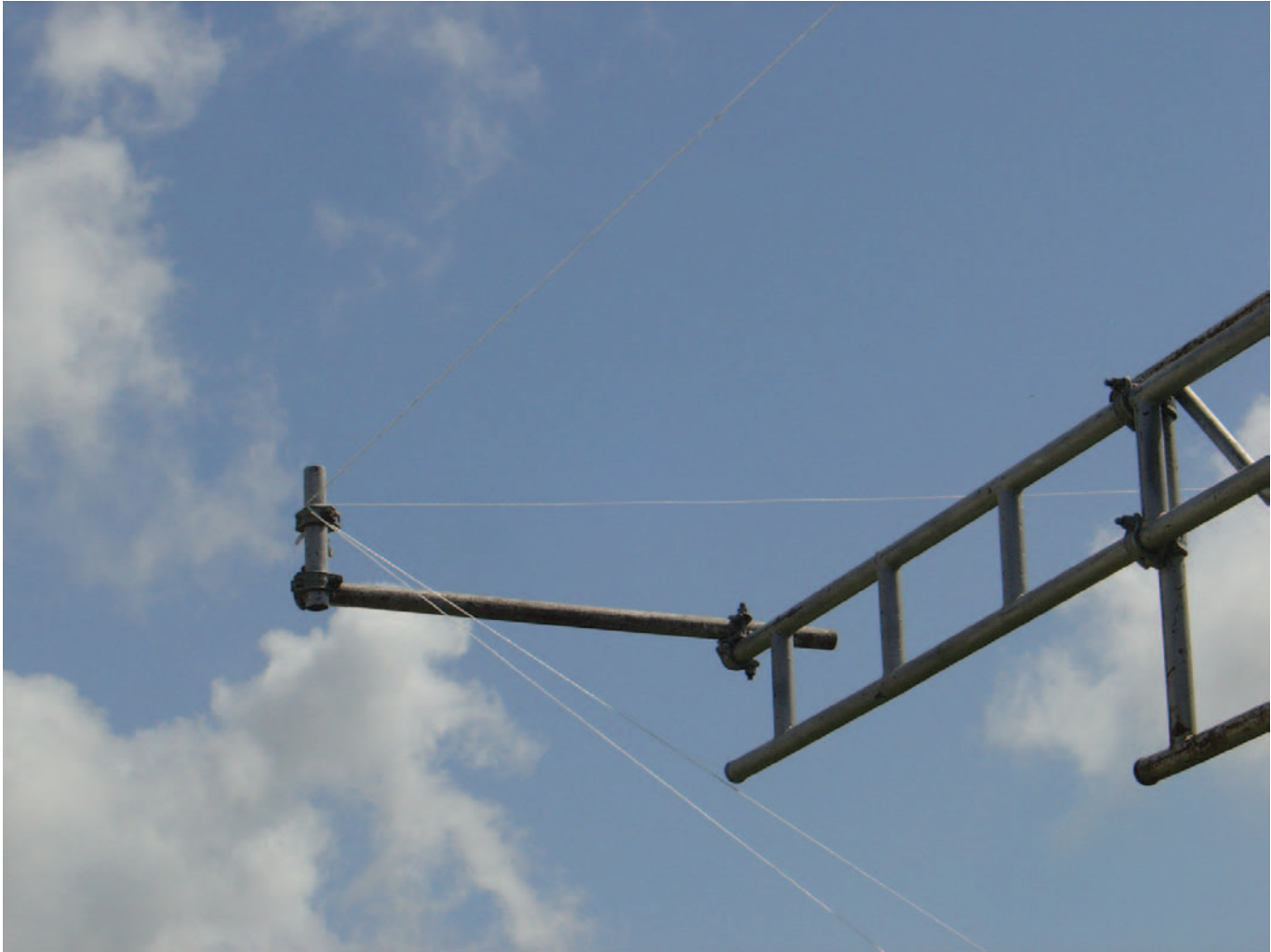


Image 8
Metal scaffolding as three-
dimensional reference in space.



Image 9
Drawing of flattened mdf panels.

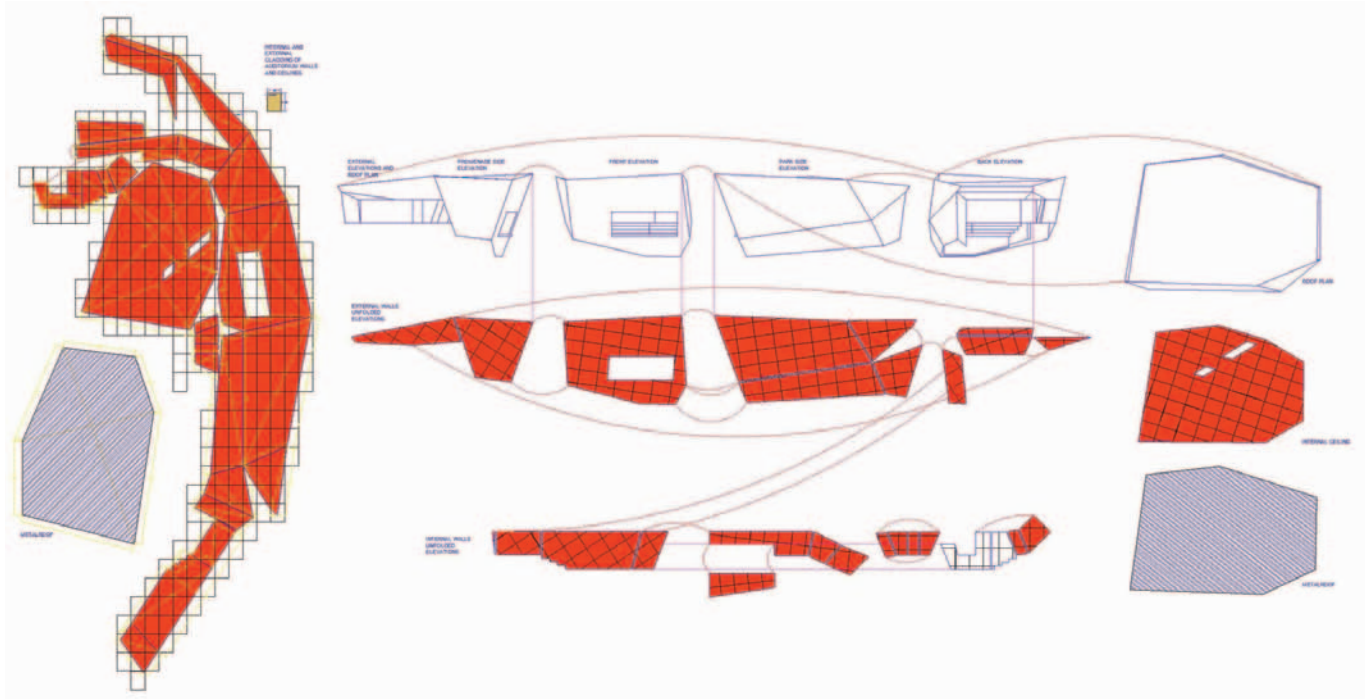


Image 10
Computer model 1.

Due to the low budget and the temporary nature of the building, as well as the speed of construction required, and the impossibility of using foundations, an internal recyclable metal scaffolding and mdf cladding for the façades (image 10) were chosen as the main construction materials/systems. A series of mdf panels were laser-cut with the logo of the exhibition through which light was projected from behind, while the negative shapes of these letters were applied in other areas of the façade.

Dissemination

The project was published and exhibited in numerous places.

Exhibitions

Exhibitions include: *Habitar Portugal*, Centro Cultural de Belém, Lisbon (2006); *The 238th General Summer Exhibition* at the Royal Academy of Arts, London (2006); the marcosandmarjan solo exhibition *Interfaces/ Intrafaces* at the iCP in Hamburg and TU in Braunschweig (2005). [see Marcos Cruz Research Output 2]

Media

A full presentation of the building was made during the press conference on 17 May 2005, as well as a live interview with Ricardo Alexandre for the national Portuguese radio programme *Antena 1* 24 May 2005.

marcosandmarjan were selected from a group of ten architects present at the *Metaflux* exhibition at the Venice Biennale 2004 by a panel of judges from the Lisbon Town Hall. The fair is considered one of the most prestigious events in the country. Owing to the high number of visitors (up to two millions in three weeks) and the celebrations of its 75 years of existence, the event attracted a lot of media attention. The media response to the intervention was very positive.

Reviews

An independent review was published by Luca Maria Francesco Fabris in *Costruire* (one of the chief architecture magazines in Italy), leading to the choice of the project as cover image of the magazine: Fabris, 'Edifici temporanei per la Fiera do livro di Lisbona – Il rosso e il verde', pp. 60–63 [see Appendix 2.1].

Major articles and highly positive reviews on the project have been published in international magazines including: Salema, 'Dois jovens arquitectos contra a geometria simétrica do Parque Eduardo VII', p. 39 [see Appendix 2.2]; Burnay, 'Pavilhão da Feira do Livro de Lisboa 2005', pp. 92–95 [see Appendix 2.3]; and Barreto, 'Conversas em torno de um Lagarto Vermelho', pp. 70–73 [see Appendix 2.4].

The project was also featured in several Portuguese newspapers and publications, including articles by Sampaio, '...', p. 31 [see Appendix 2.5]; Vitória, '...', p. 41 [see Appendix 2.6]; Lucas, '...', pp. 38, 48 [see Appendix 2.7]; Avó, p. 11 [see Appendix 2.8]; CML, *Agenda LX*, p. 91, [see Appendix 2.9].

See also related authored work such as Marcos Cruz and Marjan Colletti, *marcosandmarjan – Interfaces/Intrafaces*, pp. 48–55 [see Appendix 1.1]; Marcos Cruz and Marjan Colletti, 'Intervenções Temporárias na Feira do Livro 2005', pp. 148–149 [see Appendix 1.3].

Appendix 1: Related Articles by Marcus Cruz and marcosandmarjan

(1.1) Marcos Cruz and Marjan Colletti, *marcosandmarjan: Interfaces/ Intrafaces*, (NewYork/Wein: Springer/iCP, 2005), pp. 48–55. [see Marcos Cruz Research Output 2]

(1.2) Marcos Cruz and Marjan Colletti, 'Feira Internacional dos Açores', *Ilhas*, 17/18, *Esp. Architectura* (Portugal: Ponta Delgada, 2005), pp. 20–21 and p. 29

(1.3) Marcos Cruz and Marjan Colletti, 'Intervenções Temporárias na Feira do Livro 2005', Ana Vaz Milheiro (ed.) *Habitar Portugal* (Lisboa: Ordem dos Arquitectos, 2006), pp. 148–149.

Appendix 2: Critics' Reviews

Reviews

(2.1) Luca Maria Francesco Fabris, 'Edifici temporanei per la Fiera do livro di Lisbona – Il rosso e il verde', *Costruire*, 267 (September 2005), Milan, Italy, pp. 60–63.

(2.2) Isabel Salema, 'Dois jovens arquitectos contra a geometria simétrica do Parque Eduardo VII', *Jornal Público*, Quarta-feira (25 Maio 2005), Lisbon, Portugal, p. 39.

(2.3) Diogo Burnay, 'Pavilhão da Feira do Livro de Lisboa 2005', *JA Jornal Arquitectos*, 220/221 (July-September 2005), Lisbon, Portugal, pp. 92–95.

(2.4) Pedro Barreto, 'Conversas em torno de um Lagarto Vermelho', *Arq./a - revista de arquitectura e arte*, n.32, (Julho/Agosto 2005), Lisbon, Portugal, pp. 70–73.

Featured in Articles

(2.5) Gustavo Sampaio, 'A páginas tantas', *Independente* (25 May 2005), Lisbon, Portugal, p. 31.

(2.6) Ana Vitória, 'Encarar dificuldades com rosto rejuvenescido', *Jornal de Notícias* (25 May 2005), Lisbon, Portugal, p. 41.

(2.7) Isabel Lucas, 'A feira de todas as celebrações', *Diário de Notícias*, Quarta-feira (25 Maio 2005), Lisbon, Portugal, pp. 38, 48.

(2.8) César Avó, 'As feiras, como sempre', *Expresso* (21 May 2005), Lisbon, Portugal, p. 11.

(2.9) CML, *Agenda LX*, p. 91.

