# **DANCING LOTUS**

Macao Pavilion for the 2010 Shanghai Expo, Macao- Spirit of Cultures, Essences of Harmony

# 舞蓮

2010 上海世界博覽會 --- 澳門館 "澳門 - 文化交融、和諧體現

#### Introduction

The design of the Macao Pavilion for the 2010 Shanghai Expo, Macao –Spirit of Cultures, Essences of Harmony, explains and explores the development and new physiognomy of Macao's diverse economy and cultures, reveal the social "Spirit of Cultures, Essence of Harmony" inherited from Macao's tradition of east and west cultural exchanges. Macao is a place where tradition of cultural exchanges is an embodiment of harmony. And most important of all, this is an ever-revitalizing wonderland which promises us a brighter future.

Over 400 years of integration of oriental-western culture, the cultural and economic interactions in Macao run through its city development. Now a day, Macao becomes a communicating platform for international and Chinese traders. Macao Pavilion for the 2010 Shanghai Expo will represent the image of future Macao as an ever-revitalizing wonderland to promise us a brighter future.

## 簡介

2010上海世界博覽會---澳門館 (澳門-文化交融、和諧體現)的設計將通過展示澳門城市 多元經濟與文化的演進歷程與現貌,揭示澳門東西文化交融傳承的根源在於澳門 "兼容通達、和諧並蓄"的社會文化精神. 更重要的,澳門將會是一個更有活力和生命力的城市,以及會帶給我們更光輝的未來.

在超過400年歷史的中西文化交流,澳門的快速城市發展使文化和經濟的更加相得益彰. 今天,澳門成爲了一個連結國際與中國商人的溝通平台. 2010 上海世界博覽會---澳門館將會扮演著一個展示未來活力和生命力的舞台.

### **Concept -- Dancing Lotus**

Lotus— flower represents Macao as its flag. The Chinese also revere the sacred lotus as a symbol of purity and elegance, and it is a common motif in ancient Chinese poetry. A famous statement about the lotus' symbolism in Chinese culture is made by Confucian scholar Zhou Dunyi: I love the lotus because, while growing from mud, it is unstained.

# 概念-- 舞蓮

蓮花-- 如同區旗中的蓮花,它能代表我們澳門的精神,中國古代的文學家認爲荷花聖潔高雅,所以在古代詩詞歌賦,經常會有歌頌荷花的篇章.比如曹植在《芙蓉賦》中說"覽百卉之英茂,無斯華之獨靈",把荷花比喻爲水中的靈芝;周敦頤的《愛蓮說》寫到"予獨愛蓮之出淤泥而不染,濯清漣而不妖,中通外直,不蔓不枝;香遠益清,亭亭淨植;可遠觀而不可褻玩焉",是對荷花最出名的讚譽.

#### Forming -- Minimal Surface

In mathematics, a minimal surface is a surface with a mean curvature of zero. These include, but are not limited to, surfaces of minimum area subject to various constraints. Each unit of minimal surface can be combined side by side by different ways. In our project, the surfaces and spaces are stretched and scaled in order to improve the quality of space.

# 形體概念 -- 最少面域

在數學中,最少面域一詞的意思是彎曲的零.這包括有在多種限制下用最少的面域組成最多或無限的空間.每一個最少面域空間單元是由一塊一塊連續的面域來組成.在是次設計方案,面域和空間都經過不同程度的拉延和比例放大縮小,這是由於要使組成的空間能符合實制使用.

#### **Spatial Idea**

Open Space and Enveloped Space combine together by the logic of minimal surface. This kind of minimal surface divide the space into two coherent spaces in this project, different material (transparent and solid) offer these spaces different properties to fulfill different exhibition requirement.

#### 空間概念

開放 (虛)空間和 密閉 (實)空間經過 "最少面域"的方式去組成.這種用最少面域去組成的空間. 虛和實空間是永遠和完全地分隔的,在這次設計中,用不同的材料如透明和不透明的材料去反映該概念.也同時滿足了展示空間的需求.

#### **Construction Process**

The structural system is developed together with the way of construction to realize the freedom geometric form. The steel framework is separated by horizontal and vertical system. The benefit of this system is easy construction and repeat installed. The characteristic of mobile construction can be moved to different locations easily.

#### 結構概念

是次設計採用特別的結構爲了滿足自由形體的設計,金屬骨架結構由垂直和橫方向系統組成.好處是該結構系統易於構築和能重覆建造.更重要的是這種結構方式能簡單地拆解和組成.適合於在不同基地重覆使用.

#### **Function**

Continuous spatial experience is presented by continuous land from ground level to upper level. Ground level is entrance lobby, souvenir and main exhibition. The exhibition event continues to middle and upper levels. The middle void space lets every parts integrate together.

#### 機能

連續不斷的面域構成了連續不段的空間. 地面層的主要機能是入口大廳, 紀念品販賣處和主要的展示空間. 展覽活動隨著空間從地面層延伸到最上面樓層. 中間則是一個一挑空的虚空間. 用來把每一個實空間連貫起來.

#### **Technology Lotus Petal Wall**

Today technology has made us all virtual neighbors. The dynamic wall presents Macao's position as revitalizing petal of Lotus. All the information will be projected or showed by screens on the Wall. It means that the whole pavilion itself is platform for exhibiting as technology performs.

# 科技蓮花牆

現今的科技讓我們和虛擬世界的距離拉近.流體形的牆面代表著澳門的活力和生命力.在展覽館中,所有的信息都會投影或螢幕顯示在牆面上.所有面域(牆面,地板,天花等)都成爲了展示平台.整個展覽館本身就是個展示平台.

#### Sustainable Design

With a view to the six-month temporary nature of the Pavilion, the design adopts the use of demountable and recyclable steel structure, aluminum panels forming rain-screen, glass and other light-weight materials. The steel structure is a self framed structure with clear loading mechanism which can be assembled and dismantled easily. The allowance for natural ventilation and sunlight penetration is also considered by adopting open structure, thus to make this scheme an environmental friendly energy saving and sustainable one. The main idea is the whole building can be moved to anywhere after 2010 Expo like Zaha Hadid's Channel Mobile Art, Hong Kong.

# 永續設計

爲了六個月臨時建築物的原則,設計本身計劃採用易於組成和遁環使用的鋼材,鋁板,玻璃,和其他重量輕的材料.鋼結構本身易經拆解和組裝.自然通風和自然採光的設計考量融合到結構本身.這符合了保護環境,節省能源的理念.最重要的設計概念是在2010世博會後,整個澳門館能移師到其他地方繼續使用,就像是扎·哈迪的香奈兒移動藝術展覽館(香港一東京一倫敦).

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