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Expo

Highlights



文·林欣靜

披著
一身鮮
豔紅衣的
中國館，採
傳統的「斗拱
式」建築，配合
現代的環保工法及
極富巧思的多媒體展
演，「東方之冠」的稱號
名不虛傳。（林格立攝）

Clad in red, the China Pavilion matches modern green architectural technology and marvelous multimedia exhibitions with *dougong* brackets, which were used in traditional Chinese ceremonial buildings. Its nickname the "Eastern Crown" is well deserved. (photo by Jimmy Lin)

2010年5月1日，籌備8年的「史上最貴」世博會，終於在上海隆重登場。雖然試營運及開幕期間出現了少許失序亂象，但誰都無法否認，本屆世博絕對是「錯過難再」的經典盛會。

從沙烏地阿拉伯耗費10億人民幣（約合新台幣48億元）打造的「絲路寶船」沙特館、日本花費9億人民幣設計結合環保、科技且兼具卡通趣味的「紫蠶島」、西班牙投入5,500萬歐元（約新台幣23億1,000萬元）編製的「西班牙大籃子」，又或者是德國花費5,000萬歐元建設的「懸浮空中之城」……，就連國家財政已告破產的冰島，都「硬擠」出200萬美元籌建「冰立方」展館，難怪中國最具影響力的媒體之一「南方周末報」以「死了都要來！」形容各國不惜在金融危機陰霾下，咬牙籌資參加上海世博的景象，極為傳神。

正因為本屆世博有如此無可取代的規模、人氣與展館設計，本刊記者特別走訪中國館、西班牙館、日本館及韓國館等公認「亮點」，為讀者進行入味的「門道」導覽。在您整裝前往上海前，不妨先紙上遊歷一番吧！

On May 1, the most expensive World Expo in history, eight years in the making, finally opened in Shanghai. Although there were a few snafus during the previews and opening, there was no denying that this was a remarkable gathering the likes of which might never be seen again.

Tremendous sums were spent on the pavilions: The Saudi Arabian Pavilion, a "Silk Road treasure ship," cost about RMB1 billion (NT\$4.8 billion). The Japanese Pavilion, a "purple silkworm island" that combines technology and environmental consciousness in interesting ways, ran to about RMB900 million. The Spanish Pavilion, constructed to resemble a large Spanish basket, cost €55 million, and the German Pavilion, with its "city in balance" theme, cost €50 million. Even bankrupt Iceland spent US\$2 million to create its ice-cube-like pavilion. No wonder Southern Weekend, one of mainland China's most important media outlets, used the phrase "come hell or high water" to describe nations' ardent determination to attend Expo 2010 even in the midst of the financial crisis.

Precisely because Expo 2010 is unprecedented for its scale, character and the designs of its pavilions, Taiwan Panorama visited some of its most celebrated pavilions—including those of China, Spain, Japan and Korea—with the aim of serving as our readers' advance scouts. In the pages that follow, let us lead you on a tour!

霸氣之冠——中國館

Crown Jewel: The Chinese Pavilion

在廣達5.28平方公里，相當於990個足球場的世博園區信步閒逛，無論你身在浦東、浦西，或是處於貫穿其間的黃浦江渡輪上，都無法逃離的目光焦點，當屬高度達69公尺、約為一般展館3倍高，又披著一身鮮豔紅色外衣的中國館。

2007年，上海世博局向全球公開徵選中國館的設計方案，最後雀屏中選的廣東華南理工大學建築學院長何鏡堂，是從344件競圖中脫穎而出。何鏡堂從鼎爵、斗冠等古代器皿淬取靈感，結合鋼骨結構的現代工法，打造層層向上堆疊的斗拱建築，最後呈現的中國館，遠看像是一頂紅色的古代官帽，近看又形似昔日農村計算糧食容量的斗，十分搶眼。

為中國館定妝的「紅」，也是吸睛賣點之一。這個名為「中國紅」的外衣，是色彩學家與傳統匠師參考北京「故宮紅」色系，從一百多種紅色中挑選出從

When wandering through the World Expo site, which covers 5.28 square kilometers, whether you're to the west or east of the Huangpu—or even, for that matter, on the shuttles crossing the river—you are almost always in sight of the central Chinese Pavilion, which, at a height of 69 meters, is about three times as tall as most pavilions and bright red in color.

In 2007 the Shanghai World Expo Coordination Bureau announced an open competition to design the pavilion. From 344 entries, it ended up choosing the submission by He Jingtang, dean of the architecture school at South China University of Technology in Guangdong Province. Finding inspiration in traditional Chinese four-legged ceremonial vessels, he employed a modern steel structure to create a multilayered style similar to the *dougong* (bucket arch) system of brackets, which supported the elaborate up-turned eaves in traditional Chinese ceremonial and palace architecture. From afar, the Chinese Pavilion looks like a classical red mandarin's hat, and up close it

looks like a traditional Chinese vessel for measuring grain. It's very striking.

The red color scheme, which was chosen to put a "Chinese Red" face on the pavilion, is also one of its most arresting visual elements. From among 100 different shades of red, colorists and traditional craftsmen inspected the reds at the Palace Museum in Beijing and picked seven, including light red, vermilion, bright red and magenta. They then applied these shades to the pavilion and its metal panels at varying heights and in consideration of how light would reflect.

He Jingtang has explained that he picked red to be China's face to the world because it represents jubilation, wealth, and sumptuousness, and because it possesses a "Chinese flavor." The tall and brightly colored Chinese pavilion and the 31 local (provincial and municipal) pavilions that encircle it suggest a king surrounded by his entourage, and they announce magnanimously (or domineeringly, depending on one's perspective): "Here is the eastern crown, flourishing China, a place where granaries are full and people prosper."





淺紅、朱紅、大紅至紫紅等7種紅色搭配而成，再依照中國館金屬板外牆的高低位置及光線角度不同，塗上層次不一的紅色。

何鏡堂曾對外說明，他選擇以紅色來妝點門面，是因紅色代表喜慶、富裕、雍容華貴，又極富「中國味」。高聳鮮亮的中國館，在環繞四周的31座省市地方館襯托下，頗有一呼萬應的王者風範，也成功向全世界宣示「東方之冠、鼎盛中華，天下糧倉、富庶百姓」的大氣／霸氣意象。

除了外觀氣勢十足，中國館本身也是不折不扣的「綠建築」，例如上寬下窄、層層交疊的造型，將可為最下層的基地平台帶來自然通風、冬暖夏涼的效果，當夏季太陽高照時，陽光就不會曬進觀眾等候的基地平台。

除此之外，中國館的屋頂還設置太陽能集電板及雨水收集系統，能讓整棟展館的照明用電自給自足；四面外露的樑柱頂端，則刻上東、南、西、北等篆體文字，既有像是「印章」的趣味，亦兼具通風功能，別具匠心。

3億農民工進城的故事

如何為外型意氣風發的中國館打造同樣令人驚豔的展演內容，並非易事。經過重重的競賽關卡後，最後由來自台灣的「躍獅影像科技」執行創意總監姚開陽一路過關斬將，分別取得了中國館「創意總監」頭銜與「展示深化設計與工程承包商」的資格。

「尋找城市發展中的中華智慧」是本屆中國館的展示主題，經過與學者專家的多次討論後，姚開陽及其團隊最後確定了「3億農民工進城」的演繹方向。

「中國館的展演，可以從場外排隊人潮開始講起。」姚開陽解釋，由於中國館是世博園區的聚焦點，長長的排隊人潮勢不可免，為了消解觀眾久候不耐的情緒，他特別將垂直上下的電梯設計成「火車車廂」的造型，電梯內部兩側都有顯示螢幕，不斷地轉換田野、平房到高樓大廈等景象，如此一來，現場塞爆苦等的觀眾就宛如化身為「春運」時返鄉、進城的農民工，於是，惱人的排隊最後也變成有趣的體驗了！

從擁擠的「車廂」直上49米高的最高層展廳，一出電梯門，會有「倒掛城市」多媒體與聲光展演迎接，透過15個倒掛的投影螢幕，可以看到中國各地城市居民在同一個時間工作及生活的景況，讓觀眾親身感受農民工初進城面臨都市喧囂、疏離、壓力的不安，卻又混

合著新鮮與充滿機會的複雜心境。

其後重頭戲則是有著3面21米×8米寬的大型螢幕，加上一面24米直徑穹頂球幕組合而成的大型劇院，影片主題為《春天的故事》，由中國知名導演陸川執導，在片長8分鐘的影片中，講述大批農民工從偏鄉農村蜂擁入城、參與各種建設，戀愛、生活並傳承下一代的過程。

在古老中國中尋找智慧

《春天的故事》講述城市現況，而未來城市的發展規劃，則可由悠長歲月中的前輩經驗中尋找參考。對中國歷史極有研究的姚開陽，搬出了《清明上河圖》作為代表。

姚開陽指出，清明上河圖描繪北宋京城汴梁（即今日河南開封）在暮春清明時節的生活，而北宋是中國物質文明最發達的年代，也是最接近資本主義型態的社會，因此在畫中我們會看到商人沿街開店、漕運工人運糧卸貨，甚至還有波斯人的「拜火教」（祆教）教堂、猶太人的猶太教會堂等描繪，顯示中國自古以來即有尊重各民族多元文化的傳統，「這些都是今日我們可以借鏡的智慧。」

在這個名為「智慧長河」的展區，《清明上河圖》將透過多媒體動態投影技術，在展示牆面化身6公尺高、100公尺長的巨幅捲軸，畫中的車、船、馬、駝計、秀才、漕運工人，都會活靈活現地動起來，還有船伕拉船過河、駱駝商旅急急趕路的場景，極為生動有趣。

下樓來到第二層展區，中國館則安排了主題樂園常見的「黑暗騎乘」活動。

姚開陽解釋，所謂「黑暗騎乘」，就是讓參觀者搭乘類似「室內雲霄飛車」的載具，在結合造景與多媒體投影的封閉空間中前進，這是在歷屆世博中向來以正經八股形象著稱的中國館的首度嘗試。在這裡，民眾將坐在「一葉扁舟」造型的電動車上，穿梭於蘇州園林、拱橋、木造建築及斗拱下，領略中國老祖宗的建築智慧。

最下層的展區則以「低碳城市」為主題，主要內容則是中國政府與民間企業近年來對綠建築及環保科技的研究成果，如風力發電的推廣、藻類淨化科技的研發，以及最新型的低碳環保車等。

做為世博的「門面」，中國館從外觀到內部的展演細節，無不精心策劃、力求創新，預估也將成為世博期間人氣最旺的展館。 □

Apart from its eye-catching exterior, the Chinese pavilion is also fully “green” architecture. It looks like a stack of layers broad at the top and narrow at the bottom that is supported by four “legs,” and this design allows for natural ventilation under its central structure, providing welcome sun in winter and cooling shade in summer. When the summer sun rises high, the sun’s rays are blocked from hitting the area underneath where crowds are waiting.

What’s more, the roof of the Chinese Pavilion has a water collection system, as well as solar panels that are sufficient to supply all the electricity needed to power the pavilion’s lights. At the ends of what appear to be exposed beams on all four sides of the pavilion are openwork grates with seal-style Chinese script marking the points of the compass. Apart from providing visual interest, these grates also provide ventilation, bringing air into the building through the hollow beams. It’s a design element that demonstrates great craftsmanship.

300 million from farm to city

It was no easy feat to produce exhibition content for the China Pavilion that would match its breathtaking exterior. YAOX Edutainment, a firm from Taiwan, ended up winning a tough competition to create that content. The firm became “general contractor for exhibition design and construction” and its executive creative director Crayon Yao also assumed the title of “creative director” for the pavilion.

The core theme of the Chinese Pavilion is “Chinese wisdom in urban development.” After various discussions with experts, Yao and his group decided to go in the direction of explaining the process of “300 million peasants migrating to the cities.” “The Chinese Pavilion exhibition could be described as beginning with the lines of people waiting outside,” Yao explains. Because the Chinese Pavilion is the focal point of the World Expo, long lines are unavoidable. In order to reduce some of the public’s impatience and frustration, he specially designed the elevators to be like “train cars.” On both sides of the elevator are screens with images that continually change—from fields, to single-story homes to high rises. However tired of waiting or stressed from the maddening crowds, visitors suddenly get a sense of being like those masses of people on the move during the Chinese New Year’s holiday, either going home to their rural hometowns or returning to their lives in the big city. In this manner, the frustrations of the wait are turned into an interesting experience!

Via the crowded “train car,” you ascend to the highest-level exhibition hall at a height of 49 meters, where you are welcomed by a multimedia sound-and-light show: “City Hung Upside Down.” On 15 screens hung from the ceiling, visitors can see scenes of people busily going about their work in 15 Chinese cities at the same time. The complex work gives visitors a sense of the urban noise, alienation and pressures that face peasants who come to the city to work, as well as a sense of how the cities represent fresh and abundant opportunities to these newcomers.

Next there’s a theater with screens on three sides (21 meters long by eight meters high) as well as a 24-meter diameter domed screen above. The screens show *Spring Story*, an eight-minute short by Lu

Chuan, a famous mainland director. The film documents the story of great masses of peasants moving from remote rural villages to the cities, working on various infrastructure projects, and falling in love—their new lives and what they left behind.

Finding wisdom in ancient China

Whereas *Spring Story* gives an account of the current urban situation, for the future development plans for cities, the exhibition has instead elected to refer to the experience of older generations. Yao, who has studied Chinese history in great depth, brings out the scroll painting *Along the River During the Qingming Festival* to be representative of the ancients’ urban wisdom.

Yao points out that *Along the River During the Qingming Festival* depicts Bianliang (now Kaifeng), when it was China’s capital during the Northern Song Dynasty. And the Northern Song Dynasty represents the height of Chinese material development and civilization, with a society that was closer to modern capitalism than that of any other dynasty. Consequently, in the painting we see merchants tending their wares along shop-lined streets, and workers unloading cargo. There is even a Persian Zoroastrian temple and Jewish synagogue. These show that the Chinese have an ancient tradition of respect for ethnic and cultural diversity. “From this experience we can draw wisdom today.”

Consequently, this exhibition area, which is called “River of Wisdom,” uses multimedia and projection technology to project *Along the River During the Qingming Festival* along a wall six meters high and 100 meters long. The painting’s carts, boats, horses, clerks, scholars, and canal workers are all brought to life in a lively manner. There are also boatmen pulling their boats across the river, and camel caravans hurriedly pressing their way through the city. It abounds with interest.

One then descends to the second exhibition area, where the Chinese Pavilion features a “dark ride” like the kind often found in amusement parks (and in some places called a “ghost ride”).

Yao explains that a dark ride is something akin to an “indoor roller coaster,” which is combined with constructed scenery and projected images in an enclosed space. This is the first time a dark ride has been tried at a Chinese Pavilion (previously, the Chinese pavilions at World Expos have tended to be rather staid affairs). Here guests get into cars that are shaped like small boats, and then they are whisked through Suzhou, visiting its gardens, arched bridges, wooden buildings, and *dougong* bracketed eaves, gaining wisdom from traditional Chinese urban architecture.

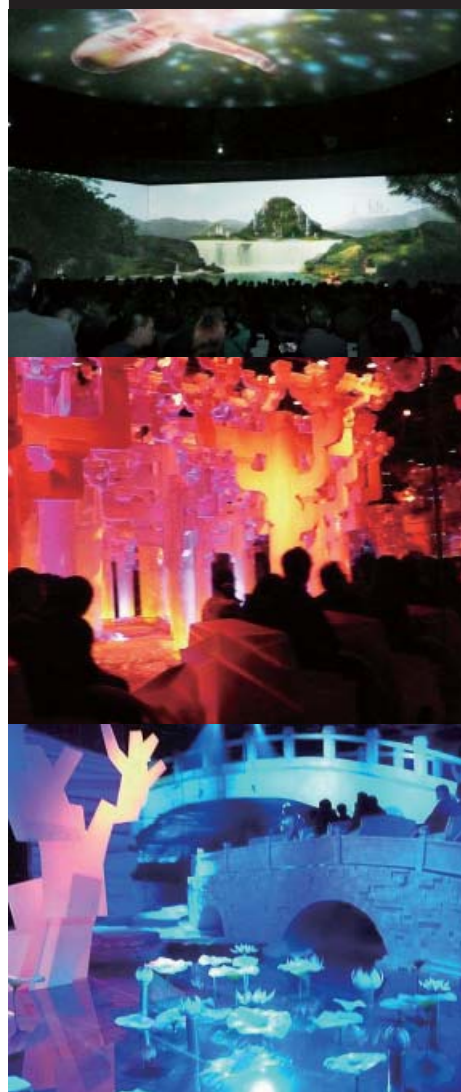
Going down another level one reaches a “low-carbon city.” Exhibited here are mainly the fruits of research into green architecture and environmental technology by the Chinese government and industry in recent years. They include what’s come out of efforts to promote wind energy, algal water-purification technology, low-carbon vehicles and so forth.

Since the Chinese Pavilion is the “face” of Expo 2010, much thought went into considering every detail of its exterior and interior. Great efforts were taken to be innovative, and it is expected to receive more visitors than any other pavilion. □

(Lin Hsin-ching/tr. by Jonathan Barnard)

(左上)「低碳城市」將最為世人詬病的中國「碳排放物」，巧手改裝成極富創意的裝置藝術，以提醒世人重視碳排放、溫室氣體與全球暖化的關連。(左下)在中國館的「低碳城市」展區，可看到由上海汽車研發的新一代環保概念電動車，車輪上還加裝了可供風力發電的特殊輪葉。(典匠資訊提供)

(facing page, top) In the “low-carbon city” area of the Chinese Pavilion, there is an environmentally friendly electric car on display that was developed by Shanghai Automotive. (courtesy of imageDJ) (facing page, bottom) China is much criticized for its carbon emissions. The “low-carbon city” skillfully and creatively turns carbon emissions into installation art, thus reminding people to pay attention to the connections between carbon emissions, greenhouse gases and global warming. (courtesy of imageDJ)



廣受好評的中國館「穹頂大劇院」，以及「黑暗騎乘」穿梭古代建築智慧的設計，均是出自其創意總監、來自台灣躍獅影像的姚開陽構思。(躍獅影像提供)

The much-praised domed theater of the Chinese Pavilion and its “dark ride,” which shuttles visitors back in time to understand the wisdom of traditional Chinese architectural design, were built under the creative direction of Crayon Yao from YAOX Edutainment, a design firm in Taiwan. (courtesy of YAOX Edutainment)



(左) 日本館的外型極為特殊，為此館方還特別舉辦命名活動，最後由來自中、日雙方近3,600件投稿中，選取了「紫蠶島」這個名稱。(日本館提供)

(left) A naming contest was held for the Japanese Pavilion. From among 3600 submissions from both Japan and China, the judges ended up picking "Purple Silkworm Island," a fun and fitting name. (courtesy of the Japanese Pavilion)

(右) 以「聯接」為主題的日本館，在第一展區中從「遣唐使」講起，聚焦在中國與日本文化的扣連。

(典匠資訊提供)
(right) With its main theme of "connections," the Japanese Pavilion's first zone describes the links between Chinese and Japanese culture, beginning with the history of the early Japanese envoys to Tang-Dynasty China. (courtesy of imageDJ)



會呼吸的紫蠶島

日本人是全世界公認最「熱愛」博覽會的民族。對日本會展產業頗有研究的淡江大學大傳系助理教授黃振家指出，19世紀末的明治維新時期，日本曾派人去英國考察，對於世博會的創新展示與振興區域經濟的作用相當震驚，從此不管是舉辦或參與博覽會均相當熱中。例如在1935年日治期間，日本人就曾經以「始政40周年紀念」為名舉辦「台灣博覽會」，在為期50天的展覽期間，總計吸引了275萬人次參觀，其中絕大多數為本島人(台灣人)、內地人(日本人)，以及少數來自朝鮮、滿洲等地的觀眾，參觀人數約為當時全島人數的1/3。

如此深愛博覽會的日本，當然會端出最吸引人的「牛肉」來迎接「史上最大」的世博。

占地廣達6,000平方公尺的日本館，由大弧形的穹頂覆蓋，穹頂還長出了3隻觸角和3個呼吸孔，配合紫色的外牆，宛如奇幻世界中的生物，又或是會在宮崎駿卡通中出現的要角！

其實紫色外衣、觸角及呼吸孔，都是最先進的環保工法。紫色外牆主要是塗上光觸媒的輕型結構薄膜(即ETFE膜材，2008年京奧「水立方」國家游泳中心外牆亦採用這種膜材)，具有吸收太陽能，降低灰塵附著的作用，即使不常刷洗，也可常保外觀美麗如新。

觸角和呼吸孔則搭配成一整組的「循環呼吸柱」，不但能收集、再利用雨水為室內噴霧降溫，也可將室外空氣吸入館內，同時把凝聚在地板上的冷空氣導引上升並形成對流，如此一來不但能節省空調能源，也使館內空氣常保暢通。

室內展演方面，日本館大致規劃了傳達各種「聯接」(つながり)信息的3

大展區。第一展區主要敘述中國與日本文化的連結，故事從一千多年前日本派遣「遣唐使」開始講起，透過多媒體動畫捲軸地悠悠道來，觀眾可清楚瞭解中國文字、茶道、書法、織布技法等，如何飄洋過海來到日本，並且深遠地影響該國の日後發展。

在這個展區中，觀眾也能欣賞到傳承1,200年的日本國寶級絲織——西陣織，這種結合各色絲線與金線、銀線的絲織技法，其實是由中國古代的宮廷編織技術演變而來。有趣的是，西陣織在現今的日本京都仍處處可見，但宮廷編織在中國卻早已失傳，兩相對照下，更加凸顯日本對文化傳承的用心。

心之和、技之和

第二個展區主題則以「從知識的聯接到心靈的聯接」為題，展區首先佈置了一座位於盛開櫻花樹下的傳統茶室，讓觀眾實際體驗珍視自然風情的日式生活，其後介紹由東京文化協會與佳能株式會社共同發起的「文化遺產保護計劃」，透過高科技的照相及複印技術，複製再現《風神雷神圖》(俵屋宗達作品，約為17世紀前半繪製)、四季花鳥圖(狩野元信作品，約為16世紀前期所繪)等國寶畫作。

這個展區的另一大賣點是向全世界介

The Japanese are known as the greatest lovers of World Expos. Huang Jenn-jia, an assistant professor of mass communication at Tamkang University, has studied Japan's exhibition industry. Huang points out that during the Meiji Restoration at the end of the 19th century, Japan sent delegations to Britain on study missions. They had a big impact, and from that point on Japan showed great enthusiasm for World Expos. For instance, in 1935, during the era of Japanese rule in Taiwan, the colonial rulers held a Taiwan Expo to celebrate the 40th anniversary of Japanese rule. During its 50-day run, the exhibition attracted a total of 2.75 million visitors. The majority were Taiwanese, followed by Japanese, and then smaller numbers of Koreans, Manchurians and other groups. The total number of visitors equaled one-third of the island's population.

Considering the great enthusiasm that the Japanese have for international exhibitions,





日本館

Japanese Pavilion: Purple Silkworm Island

it should come as no surprise that they brought out the works for an event billed as "history's largest" World Expo.

The Japanese Pavilion sits on about 6000 square meters. The large arching domed roof has three "tentacles" extending from it, as well as three concave "breathing holes." With its lavender exterior, it looks like some creature from an imaginary world, or a leading character in a Hayao Miyazaki animated film!

In fact, the purple exterior, tentacles and breathing holes are all manifestations of cutting-edge environmental methods. The lavender exterior is made of a lightweight photocatalyst-treated ETFE membrane. (The Beijing National Aquatics Center, or "Water Cube," which was home to swimming events during the 2008 Summer Olympics, also has an exterior made of this material.) It absorbs solar energy and lowers dust levels, and it keeps a beautiful-as-

new appearance even if it isn't often cleaned.

The tentacles and breathing holes are matched together to form an "environmental breathing pillar." Not only can the pavilion collect and reuse rainwater through interior misting that reduces the temperature inside, but it can also bring in air from outside through the breathing holes. At the same time it can take the cold air that collects at the floor and move it upwards in a cycle. This not only saves money and energy by reducing the need for air conditioning, but it also keeps the air inside the pavilion fresh.

The Japan Pavilion is divided into three exhibition zones with an overarching theme of "connections." Zone 1 mainly describes the connections between Chinese and Japanese culture. The story begins with the early Japanese envoys to Tang-Dynasty China, and unfolds along a long multimedia "scroll." Visitors get a clear understanding of how Chi-

nese writing, the tea ceremony, calligraphy, weaving techniques and so forth migrated across the sea to the land of the rising sun, as well as the deep impact they would have on Japan's later development.

In this area, visitors can also enjoy *nishijin* weaving, a national treasure with a 1200-year history. This style of weaving, which makes use of silk threads of various colors as well as gold and silver threads, in fact evolved from weaving techniques used at the Chinese imperial courts. Interestingly, *nishijin* weaving is common in modern-day Japan, and yet court weaving techniques have almost entirely disappeared in China. That contrast highlights the determination with which Japan has worked to preserve its cultural legacy.

Hearts and skills

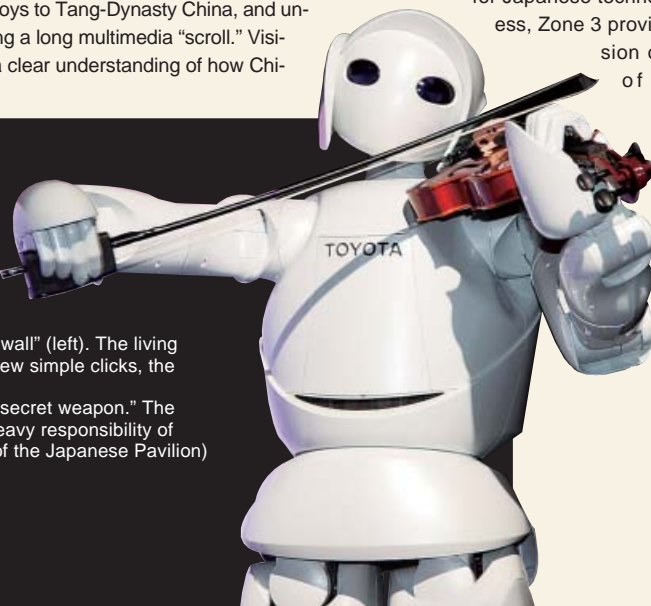
The main theme of Zone 2 is "connecting knowledge and soul." For starters, this zone offers a life-size model of a teahouse under blooming cherry trees that provides visitors with a sense of the Japanese affinity for nature. Next is Japan's "Cultural Heritage Inheritance Project," which is a joint endeavor of the non-profit Tokyo Culture Association and Canon Inc. With high-tech cameras and reprographic technology, this area reproduces such masterpieces as Sotatsu Tawaraya's *Wind God and Thunder God*, which is a pair of painted folding screens from the first half of the 17th century, and *Flowers and Birds of the Four Seasons* by Motonobu Kano from the early 16th century.

Another strong point of this zone is its introduction to how Japan is adapting to a shortage of water resources and global warming. For instance, it introduces the latest technology used to treat seawater and sewage and turn them into potable water, and makes predictions about the widespread use of various inventions in the "zero-carbon city" of 2020, such as power-generating flooring (which will generate energy as it is stepped on and force is applied to it), power-generating windows (which have glass with a thin film of photovoltaic cells attached) and household fuel cells (which use energy produced from hydrogen and oxygen to provide households with electricity and hot water).

After the visitor has gained an appreciation for Japanese technological prowess, Zone 3 provides a conclusion on the theme of "spiritual

(左) Panasonic株式會社為未來生活開發的「生活牆」，將客廳的牆壁和電視機整合一體，只要簡單的操作，電視機就能隨心所欲地顯示在牆面上任何位置。(右) 由豐田汽車研發的「伙伴機器人」，是日本館的「秘密武器」，這種機器人的手部活動極為靈活，可擔負看護老人的重責，甚至還可演奏小提琴。(日本館提供)

Looking toward the future, Panasonic has developed a "life wall" (left). The living room wall and television set are one and the same: With a few simple clicks, the television can appear anywhere on the wall you want it to. Toyota's "Partner Robot" (right) is the Japanese Pavilion's "secret weapon." The robot's hands are very nimble, enabling it to shoulder the heavy responsibility of caring for old people. It can even play the violin. (courtesy of the Japanese Pavilion)



日本館也展示由佳能相機開發的「萬能相機」，具有「自動識別笑容」與「高清望遠」的全方位功能，能在不使用3D技術的條件下，為照片營造出靈動寫實的立體空間。（日本館提供）

This "Wonder Camera" at the Japanese Pavilion was developed by Canon. A high-definition ultra-telephoto still camera, it captures all objects, whether near or far, in sharp focus, creating a three-dimensional effect without using 3D technology. (courtesy of the Japanese Pavilion)



紹日本因應水資源短缺及全球暖化的對策，例如將海水、地下水處理成飲用水的最新科技，以及當2020年發展成「零碳排放城市」時，預計可普及的「發電地板」（在踩踏及其他外力作用下即可發電的地板）、「發電窗」（貼有透明薄型太陽能電池的窗玻璃）及「家用燃料電池組合」（利用氫氧能源提供家庭用電及溫水）等重要發明。

領略完日本的科技大國實力後，第三展區則以「心靈的『聯接』與未來的和美」作結。在這個展區內，設置了一個可容納550人的大型劇場。

在暖場表演中，最引人注目者，是由豐田汽車研究的「伙伴機器人」，這種機器人的手指細部動作相當靈活，甚至能演奏小提琴，因此可在日本的「高齡化」社會中，擔負起看護老人的重責。

另一場重頭戲表演，則是結合日本傳統「能劇」節奏與中國昆曲音律的大型音樂劇《拯救朱鷲》，內容則為日本與中國民眾共同保護瀕絕的鳥類「朱鷲」事蹟。這部兼具環保與中日友好合作意義的音樂劇總長20分鐘，預計在世博半年展期至少將上演6,400場，由3組中國本地招募的演員輪番上場，是極為耗費人力的投資。

看完演出後，還會有最受歡迎的機器人現身，為觀眾演奏優美的小提琴，以「心之和、技之和」為題演繹日本館，也至此畫下完美句點。 □

'connections' and future harmony." In this zone there is a theater that can hold 550 people. During the warm-up acts, what most attracts people's notice is Toyota's Partner Robot. The robot's hands are extremely nimble and can even play a violin. As Japan's society ages, perhaps robots like these will be able to help take care of the elderly.

There is also a performance piece on the crested ibis, an endangered bird that both Japanese and Chinese are working to protect. The work blends traditional Japanese Noh theater with Chinese Kunqu Opera. It is estimated that the 20-minute drama, which stresses environmental protection and Japanese-Chinese harmony, will be performed 6400 times over the half year of Expo 2010. With three different casts of Chinese actors, the drama represents a very labor-intensive investment.

After the show, the robot, who's a real hit with audiences, comes out to play a beautiful piece on the violin, providing a fitting conclusion for the Japanese Pavilion and its theme: "harmony of the hearts, harmony of the skills." □

(Lin Hsin-ching/tr. by Jonathan Barnard)

曾在2005年日本愛知世博會獲選為「優秀國家館」的韓國館，此次仍由上屆擔任館長的「大韓貿易投資振興公社」的韓國政府副代表朴殷雨操盤，在此盛會為世人展現大韓民族最引以為傲的傳統文化與資訊科技。

由眾多韓文字母組合而成的韓國館，是本屆世博中唯一取材自文字造型的展館。現行的韓文文字是由15世紀韓國明君「李朝世宗大王」整理頒布而來，總計有10個母音及14個子音字母。

外型與韓國總統李明博頗有幾分神似的朴殷雨介紹，由於韓文是拼音文字，必須由母音和子音結合才能形成一個有意義的「字」，因此韓文本身即具「溝通、融合」的意涵，這也是城市生活的重要元素。

「再加上韓文外型富有藝術性，而且學韓文、看韓劇、品嚐韓國美食，已成世界潮流，所以才決定以韓文字母的造型來設計展館，」朴殷雨解釋。

除此之外，韓國知名旅美畫家姜益中



文字牆堆出

也參與外觀建築設計，他以「藝術像素」的馬賽克創作理念，將總計4萬8,000個韓文字，以五彩「畫」在韓國館外牆上，組合起來就成為多篇有意義的詩、雜記或散文，非常有趣。

走進韓國館，一樓最醒目的則是相當於首爾1/300比例的微縮造景，由於首爾依山傍水，因此韓國特別安排了寬5米、長85米的水路代表穿越首爾的「漢江」，山的部分則由表演舞台及觀眾席隱喻，在世博期間，天天都有韓國民俗舞蹈、紅遍全世界的「亂打」打擊樂團、「Jump」喜劇功夫秀」、「Wonder Girls」的〈Nobody〉歌舞秀等精采演出輪番上場。

韓流明星來加持

二樓展區則以「文化、人性、生態、科技」等4個層面的展示，來呈現現代化的韓國城市生活。以IT及軟體科技聞名於世的韓國，還特別安排了4名像極了韓劇男女主角的虛擬導覽員，帶領觀

眾走進「動態藝術牆」（內有即時影像控制系統，可捕捉遊客移動的軌跡，再透過電腦處理呈現夢幻般的藝術效果，同時反映在兩邊的牆面上），以及體驗未來結合餐桌、睡床與工作室為一體的環保住宅等創新設計。

曾在愛知世博廣受歡迎的「韓流」影視文化，也將成為本屆韓國館的絕佳賣點。朴殷雨透露，包括李準基、張娜拉、Rain、寶兒等知名韓流明星均會現身韓國館與廣大粉絲會面。

除此之外，韓國館還會不定期安排「看韓劇、學化妝」的活動，讓每個人都有機會體驗「深眼線、唇線加艷麗唇彩的傳統派」或者「接近膚色系的自然派」等妝容，「變身」為韓劇的女主角。

至於在上屆世博幾乎讓日本師奶為之瘋狂的韓劇《冬季戀歌》男主角裴勇俊，因在大陸的人氣已逐漸退燒，此次將不會出席。「我們會依據各地市場不同而調整方向，」朴殷雨笑說。 □

For Expo 2005 in Aichi Japan, the Korean Pavilion was selected as an "outstanding national pavilion." As in 2005, the Korea Trade-Investment Promotion Agency's Park Eun Woo is serving as director-general of the Korean Pavilion at Expo 2010. This time the pavilion introduces two of the things about which Koreans are most proud: their traditional culture and their information technology.

The Korean Pavilion, which has exterior walls covered with the Korean Hangeul script, is the only exhibition pavilion at the World Expo that based its design on the written word. Hangeul was established in the 15th century during the rule of Sejong the Great. It has a total of 10 vowels and 14 consonants.

Park, who looks a lot like Korean president Lee Myung-bak, explains that in the phonetic-based script of Korean each word must consist of at least one vowel and one consonant. Consequently, the Korean language holds within it the sense of "communication and blending," which also happen to be important attributes of urban life.

"What's more, the Korean written language is full of artistry, and studying Korean, watching Korean television shows and eating Korean delicacies have become a global trend," explains Park. "Hence, it was decided to base the design of the pavilion on Hangeul."

Kang Ik-joong, a famous Korean painter now living in the United States, participated in designing the architecture. Pulling together many interesting poems, miscellany and essays, he used a total of 48,000 Korean characters in five different colors to "paint" the exterior walls of the Korean Pavilion as if they were a mosaic of "artistic pixels." It creates an interesting effect.

韓國館長朴殷雨也是上屆愛知世博韓國館的操盤手，他的弟弟畢業於政治大學，因此朴殷雨對台灣極有親切感，非常希望有機會來台一遊。

Park Eun Woo, the director-general of the Korean Pavilion, also led Korea's effort at the Expo 2005 in Aichi, Japan. Because his brother graduated from National Chengchi University in Taipei, Park has an emotional tie to Taiwan and would like to visit the island.



The most eye-catching thing on the first floor of the Korean Pavilion is a 1:300 scale model of Seoul, with mountains on one side and water on the other. The pavilion has a five-meter wide, 85-meter long water channel to represent Seoul's Han River, which visitors have to cross. A performance stage and auditorium seats serve metaphorically as the mountains. During the period of the World Expo, there will be a variety of performances every day, including folk dancing, percussion performances by Nanta Theater, the comedic martial arts show *Jump*, and performances of the Wonder Girls' song "Nobody."

Korean stars come in support

The second-floor exhibits focus on culture, humanity, nature and technology to demonstrate modern Korean urban life. World famous for its IT and software, Korea specially arranged four holograms of male and female idols from Korean television to lead visitors to a "moving art wall" (which has a "real-time image control system" that records images of visitors' movements and then projects them onto the walls on both sides.) Visitors also see environmentally friendly designs for home furnishings in a room that has a dining table, bed and office desk.

Korean television dramas, which met with an enthusiastic response at Expo 2005 in Aichi, is also one of the Korean Pavilion's biggest selling points. Park notes that various stars, including Lee Jun Ki, Jang Nara, Rain, and BoA, will appear at the pavilion to come face to face with their fans.

What's more, the Korean Pavilion will from time to time hold activities such as "watching Korean TV shows and learning how to apply make-up." These will allow people to gain an understanding of the "transformations" of the "traditional school" of Korean make-up that aims to "deepen the eye lines and lip lines and darken the color of the lips" as opposed to the "natural school" that uses makeup closer to skin color.

As for Bae Yong Jun, the star of the show *Winter Sonata*, whom older Japanese female fans went crazy over at the last World Expo, he won't make an appearance this time. "We're going in a different direction to match the particulars of the market," laughs Park. □

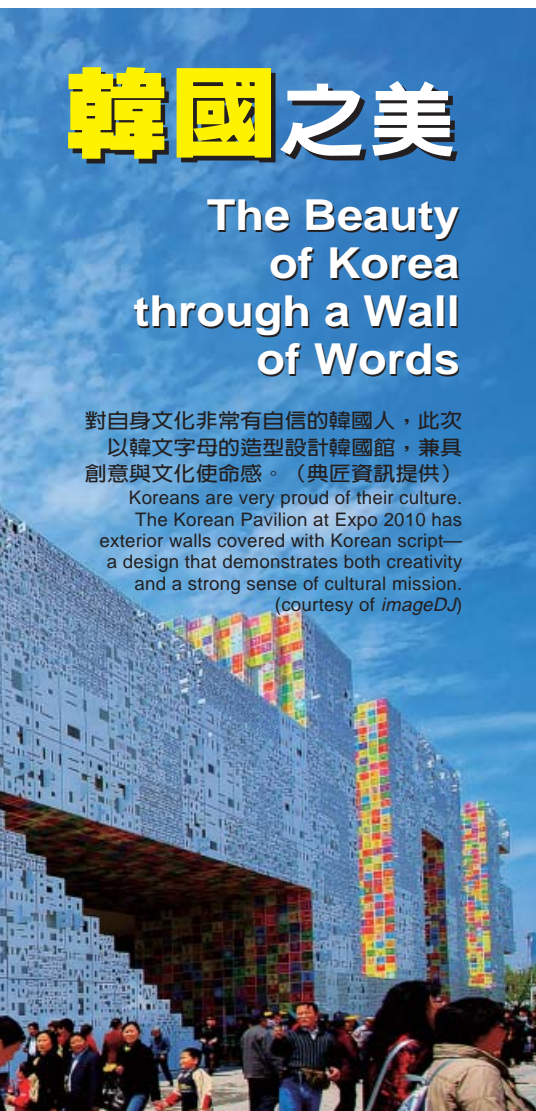
(Lin Hsin-ching/tr. by Jonathan Barnard)

韓國之美

The Beauty of Korea through a Wall of Words

對自身文化非常有自信的韓國人，此次以韓文字母的造型設計韓國館，兼具創意與文化使命感。（典匠資訊提供）

Koreans are very proud of their culture. The Korean Pavilion at Expo 2010 has exterior walls covered with Korean script—a design that demonstrates both creativity and a strong sense of cultural mission. (courtesy of imageDJ)



西班牙大籃子

極為重視

在世博盛會中行銷國家形象的西班牙，早在2000年德國漢諾威世博會時，即由政府部門成立「國家國際展覽署」，專責世博會期間西班牙國家館的統籌規劃及營運，從此之後，西班牙館在世博會的建築設計與展演均廣受好評。

為了在建築素材上力求創新，西班牙這次選擇了兼具環保及傳統手工藝之美的手編藤板（藤條編織在西班牙及中國均為常見的藝品或建材），作為收點門面的主角。館方就近找來山東省博興縣的22名傳統藤編工匠，花了整整半年，製作了8,524片手工藤板，再配合總長2萬5,000米的鋼結構搭建而成。

編織完成的藤板，呈現米、棕、黑3種色澤，前者是藤條的原色，後二者則是在浸有柳枝、柳葉的沸水中分別「煮」5小時及9小時後自然形成。3色配搭的藤板暗藏玄機，遠看還依稀可見「日」、「月」、「大」、「友」等漢字花樣。

展演方面，西班牙館此次以「我

們世代相傳的城市」為主題，館方找來3名該國最知名的導演，分別策劃「起源」、「城市」、「孩子」等3大展區。

其中「起源」展區，是在岩洞造型的劇場中娓娓道來。該區導演比格斯·魯納（電影《我愛喬安妮》導演），利用數片自家菜園歷經半年風吹日曬雨淋的大型畫布，作為播放多媒體影片的「岩壁」屏幕，極富巧思。在這裡，不但可欣賞到跳著傳統弗朗明哥舞的舞者從屏幕中「舞出」的效果；當知名的潘普洛納奔牛節畫面出現時，岩洞的地板也會同步「萬牛奔騰」地震動，讓觀影者有身歷其境的震撼感。

小米寶寶祝福明日城市

「城市」展區，則在西班牙知名作曲家法雅的歌劇作品《彼得大師的木偶劇》旋律中緩緩展開。在這個由5面巨型屏幕裝置而成的劇場中，將播放由大量的老照片、文獻資料及珍貴影片拼貼而成的7分半鐘短片，記述西班牙從上世紀初的農村遷徙過程，經過二次大戰戰火喧囂的洗禮，從百廢待舉中復甦，最後才行至當代西班牙的城市面貌。

「藉由這段西班牙曾走過的歷程，希望能帶給正在發展中的中國，找到未來規劃城市時的參考經驗，」西班牙館宣傳及文化項目部主管陽月如此表示。

最後一個「孩子」展區，則設置了西班牙館的秘密武器——高達6.5公尺的「小米寶寶」，這個像極可愛嬰兒的巨型機器娃娃，原型其實是西班牙一名8

個月大的嬰兒。一年前，負責「孩子」展區的女導演伊莎貝爾·庫伊謝特（電影《東京聲音地圖》導演）在巴塞隆納進行了兩次試鏡，才從40名8個月到1歲大的寶寶中選中了這位現場評審公認最愛笑、最有人緣的寶寶。

以這個可愛嬰兒為造型的小米寶寶，不但有足以「融化人心」的笑容，而且會眨眼、會呼吸，還會以「你好」、「hola」的中、西文雙聲帶與遊客打招呼；小米寶寶的周圍則安排了6個巨型泡泡，代表他的夢境——未來之城，在這裡，每個孩子都能受到義務教育、每個公民也都享有價格合理的醫療保險。

洋溢著歡笑與孩子對未來美好想望的第三展區，也將為參觀者帶來最美好的觀展回憶。 □

（左）以8,524片手工藤板組合而成的西班牙館，不管從任何角度觀看都別具風情。（西班牙館提供）

Constructed from 8524 wicker panels, the Spanish Pavilion looks extraordinary from whatever angle it is viewed. (courtesy of the Spanish Pavilion)



（林格立攝） (photo by Jimmy Lin)

(下圖由左至右) 西班牙館的第一展區是以「岩洞」為造型的多媒體劇場，影片中可觀賞傳統弗朗明哥舞的表演；第二展區則為5面巨型屏幕組成的劇場，為觀眾展現西班牙近百年的城市變遷過程；第三展區高達6.5公尺的「小米寶寶」機器娃娃，則是以8個月大的嬰兒為創作原型，表情非常細緻逼真，將闡述孩子們對未來城市生活的理想願景。

The first room of the Spanish Pavilion is a multimedia theater with the appearance of a cave. The film screened here includes traditional flamenco dancers.

The second room has five giant screens that show the process of urban transformation in Spain over the last 100 years.

Baby Miguelin, 6.5 meters tall, is a mechanical doll modeled upon an eight-month-old Spanish baby. Featuring extraordinarily lifelike expressions, it offers a look at the ideals held by the young for the future of cities.

滿載驚喜

Spanish Pavilion: Basket of Joy

Spain puts a lot of emphasis on marketing its national image through World Expos. Since 2000, when the Spanish Society for International Exhibitions was established to prepare for Expo 2000 in Hanover and was charged with promoting the nation's international exhibitions and planning and operating its pavilions, the nation's pavilions have been widely praised.

This time Spain selected hand-woven wicker panels to take the spotlight (wicker is a common material for handicrafts in both Spain and China). The pavilion hired 22 traditional wicker artisans from Shandong Province, who spent nearly half a year constructing the 8,524 hand-crafted panels, which cover a structure built from 250,000 meters of steel beam.

The wicker comes in beige, brown and black. The first is the material's original color, and the later two are the result of the wicker being steeped in the juice of willow branches and leaves for either five or nine hours. The

three colors have provided some mystery to unravel: From afar you can vaguely make out the shapes of various simple Chinese characters—日 (*ri*—sun or day), 月 (*yue*—moon or month), 大 (*da*—big), and 友 (*you*—friend).

For its exhibitions, Spain has chosen the theme of urban legacy: "From the city of our parents to the city of our children." It hired three famous Spanish directors to separately plan three large separate spaces: "Origin," "Cities" and "Children."

In "Origin" a tale slowly begins to unfold in a theater made up to resemble a cave. Bigas Luna, (the director of *My Name is Juan!*) makes use of a large canvas that was left out exposed to the elements in his garden to serve as the screen for projecting film that is part of a multimedia work; it's all very creative. Here, not only can one enjoy the experience of traditional flamenco dancers dancing seemingly right "off the screen," but when an image of the famous "running of the bulls" in

Pamplona appears, the floor shakes as if from a stampede. It's as if the audience has been deposited amid the actual frenzy of the festival.

Baby Miguelin and the city of tomorrow

The film *Cities* unfolds to the tune of *Master Peter's Puppet Show* by Manuel de Falla. In this theater formed by five giant screens, a short film created from a mélange of old photographs, documents and precious film clips provides a record of urban Spain—beginning early last century with the migration from farm to city, through the convulsions of civil war, on to the rebuilding process afterwards, until finally arriving at the contemporary Spanish city of today.

"Through this process that Spain has gone through, we hope to give China, which is in the process of developing, experience that it can refer to in the future planning of its cities," says Yang Yue, the pavilion's officer for communications, culture and programs.

The final space—"Children"—contains the Spanish Pavilion's secret weapon: a 6.5-meter-tall "Baby Miguelin." This extremely cute giant mechanical baby was based on an eight-month-old actual Spanish baby. The director responsible for this room—Isabel Coixet (director of *Map the Sounds of Tokyo*)—twice held tryouts in Barcelona, picking Miguelin from among 40 babies in the age range of eight months to a year. Miguelin is known for being very agreeable and for loving to laugh.

This loveable Baby Miguelin not only "melts people's hearts" with his smile, but he also blinks, breaths and says "*hola*" to welcome visitors. The baby is surrounded by six giant bubbles which represent his dreams about the city of the future, a place where every child will receive education, and every citizen will enjoy reasonably priced health care.

This third exhibition area, which is brimming with happy laughter about a beautiful future, also gives visitors the happiest of exhibition-going experiences. □

(Lin Hsin-ching/tr. by Jonathan Barnard)



(西班牙館提供) (courtesy of the Spanish Pavilion)

