Министерство образования и науки Российской Федерации
Волгоградский государственный архитектурно-строительный университет

СОВРЕМЕННАЯ АРХИТЕКТУРА И ДИЗАЙН

Сборник текстов

для практических занятий по английскому языку

Составила О.Н. Романова

Волгоград
ВолгГАСУ
2012

УДК 72.036:747:802.0(076)
ББК 85.11я73+30.18я73+81.432.1-923я73
С 568

Р е ц е н з е н т ы:
кандидат педагогических наук, доцент кафедры лингвистики и межкультурной коммуникации (ЛиМК) ВолгГАСУ *Н.А. Вишневецкая;*
доцент кафедры ЛиМК ВолгГАСУ *Ю.Г. Макуев*

С 568 **Современная** архитектура и дизайн [Электронный ресурс] : сборник текстов для практических занятий по английскому языку / М-во образования и науки Росс. Федерации, Волгогр. гос. архит.-строит. ун-т ; сост. О.Н. Романова. — Электронные текстовые данные (9,5 Мбайт). — Волгоград : ВолгГАСУ, 2012. — Учебное электронное издание комбинированного распространения : 1 CD-диск. — Систем. требования: PC 486 DX-33; оперативная память Microsoft Windows XP; 2-скоростной дисковод CD-ROM; Adobe Reader 6.0. — Официальный сайт Волгоградского государственного архитектурно-строительного университета. — Режим доступа: http://www.vgasu.ru/publishing/on-line/ — Загл. с титул. экрана.

ISBN 978-5-98276-531-4

Содержатся оригинальные неадаптированные тексты, освещающие новые тенденции и подходы в области архитектуры и дизайна. Предназначено для развития навыков чтения и перевода научно-технической литературы по специальности. Для студентов 2-го курса архитектурного профиля очной и заочной форм обучения.

УДК 72.036:747:802.0(076)
ББК 85.11я73+30.18я73+81.432.1-923я73

ISBN 978-5-98276-531-4

Content

Part 1

The highest building in the world

Amongst the urban landscape and thousands of ordinary brick-and-mortar buildings, skyscrapers are architectural and engineering marvels that rise hundreds of meters and even a thousand feet into the air. The Council on Tall Buildings and Urban Habitat (CTBUH), is the official body that determines which buildings fall under the 'The World's Tallest Building' category.

It ranks the height of buildings, based on the height to the architectural top of the building, highest occupied floor, top of the roof or the tip of the building.

1. Burj Khalifa

The building officially opened on 4 January 2010 in United Arab Emirates, Dubai. From May, 2008 it's the tallest skyscraper in the world, its height is 828 m, 163 floors.

Burj Khalifa has been designed like city within a city, with its own parks, lawns, boulevards. The total cost for the project was about US $1.5 billion. The tower's architecture and engineering were performed by Skidmore, Owings and Merrill of Chicago, with Adrian Smith as chief architect. Hotels, apartments, shopping centers are located in Dubai tower.

According to the project, on 37 ground floors the hotel will take place, and 700 magnificent apartments will occupy floors from 45 to 108. The majority of premises is taken away under offices. On 123 and 124 floors the lobby and a viewing point are located. The Tower-antenna over the basic building is equipped by necessary telecommunication technics

The consistency of the concrete used in the project was essential. It was difficult to create a concrete that could withstand both the thousands of tonnes bearing down on it and temperatures that can reach 50 °C . To combat this problem, the concrete was not poured during the day. Instead, during the summer months ice was added to the mixture and it was poured at night when the air is cooler.

A total of 57 elevators and 8 escalators are installed. The elevators have a capacity of 12 to 14 people per cabin, the fastest rising and descending at up to 18m/s.

Skyscraper building has begun in 2004.Concrete works were conducted to 160 floors, further there was an assemblage of a 180-meter spire from metal designs. The tower will develop electricity for itself: the 61-meter turbine rotated by a wind, and also a file of solar panels on a tower walls will be used for this purpose. Except that, the building is equipped by special protection against the Sun and reflecting glass panels, which reduce heating inside, that reduce necessity for air-conditioning. The air conditioning system draws air from the upper floors where the air is cooler and cleaner than on the ground. For cooling sea water and underground cooling modules are used. Nowadays Burj Khalifa is the highest skyscraper in the world and the symbol of modern Dubai.

2. Taipei 101

Taipei 101 was designed by C.Y. Lee & partners.

Taipei 101 is designed to withstand the typhoon winds and earthquake tremors common in its area of the Asia-Pacific. Planners aimed for a structure that could withstand gale winds of 60 m/s and the strongest earthquakes likely to occur in a 2,500 year cycle.

Skyscrapers must be flexible in strong winds yet remain rigid enough to prevent large sideways movement (lateral drift). Most designs achieve the necessary strength by enlarging critical structural elements such as bracing. The extraordinary height of Taipei 101 combined with the demands of its environment called for additional innovations.

The design achieves both strength and flexibility for the tower through the use of high-performance steel construction. Thirty-six columns support Taipei 101. The foundation is reinforced by 380 piles driven 80 m into the ground. Thornton-Tomasetti Engineers designed a 660 tonnes steel pendulum. Suspended from the 92nd to the 88th floor, the pendulum sways to offset movements in the building caused by strong gusts. Taipei 101's characteristic blue-green glass curtain walls are double paned and glazed, offer heat and UV protection.

Taipei 101 tower has 101 stories above ground and five underground. Ground to highest architectural structure (spire) is 509.2 meters.

The building was architecturally created as a symbol of the evolution of technology and Asian tradition. Its postmodernist approach to style incorporates traditional design elements and gives them modern treatments. The repeated segments simultaneously recall the rhythms of an Asian pagoda (a tower linking earth and sky, also evoked in the Petronas Towers). At night the bright yellow gleam from its pinnacle casts Taipei 101 in the role of a candle.

In Taipei 101 shops, offices, restaurants, bars, viewing platforms are located.

Taipei 101is the symbol of modern Taiwan.

3. S

hanghai World Financial Center

China has the largest number of tall buildings in the world.

This super tall skyscraper in Shanghai that dominates the skyline over East China is destined to become a symbolic icon, giving the city a new status and

depicts the arrival of a new era in Asia. It was designed by Kohn Pedersen Fox(main designer is David Malott) and officially opened its doors to the public on August 28th, 2008. It is a mixed use building with excellent urban shopping malls at the base, a 174-room luxurious five-star hotel at the top and sixty-two floors filled with offices. There are three observation decks between the 94th to the 100th level.

Building started on August, 27th, 1997, but because of financial crisis of 1998 it was stretched for ten years.

In 2003 changes have been made to the project, in particular, with the company-developer Exhaust Group the height of a building to 492 m and quantity of floors to 101, from initial 460 and 94 accordingly has been increased.

In 2005 the form of window at top of the building intended for reduction of resistance of air. Firstly Fox supposed that it will be window of the roundish form of 46 m. However this design has caused the big protests from citizens, including the mayor of Shanghai who considered that it is very similar to a rising sun on a flag of Japan. The round aperture has been replaced on trapezoid that reduced the price of a design and simplified project realization. The protected floor is on each twelfth floor of a building. It is intended for shelter of people from fire. Each such floor has own strengthened reinforced concrete skeleton that divides all building into sections, and raises it durable properties. These floors are strengthened by a fire-resistant steel, also there are glass windows on these floors which could be broken for access of air to a premise.

It has a total of 31 elevators and the construction cost was US $1.20 billion. The most remarkable feature of this majestic building is the aperture at the top of the building.

4. The International Commerce Centre

The International Commerce Centre (abbr. ICC Tower) is a 108 floor, 484 m (1,588 ft) skyscraper completed in 2010 in West Kowloon, Hong Kong. It is currently the world's fourth tallest building.

Its formal development name is Union Square Phase 7 and the name International Commerce Centre was officially announced in 2005. International Commerce Centre was completed in phases from 2007 to 2010. The tower was opened in 2011, with the Ritz-Carlton opening in late March and the observatory in early April.

The height has been scaled back from earlier plans due to regulations that didn't allow buildings to be taller than the surrounding mountains. The original proposal for this building was called Kowloon Station Phase 7 and it was designed to be 574 m (1,883 ft) tall with 102 floors.

The tower was designed by the American architectural firm Kohn Pedersen Fox The Associates (KPF) in association with Wong & Ouyang (HK) Ltd

5. The Petronas Towers

Vital Facts:
Location: Kuala Lumpur, Malaysia
Height: 452 meters
Stories: 88
Architects: Cesar Pelli & Associates
Cost: $1.6 billion
Official Opening: August 28, 1999

On April 15, 1996, the Council on Tall Buildings named the Petronas Towers the tallest in the world, passing the torch to a new continent. Although the project's developers, a consortium of private investors in association with the Malaysian government and Petronas, the national oil company, had not originally set out to surpass Chicago's Sears Tower, they did aspire to construct a monument

announcing Kuala Lumpur's prominence as a commercial and cultural capital. In the design of American architect Cesar Pelli they found a winning scheme-twin towers of elegant proportions with a slenderness ratio (height to width) – that would capture not only the title but the public imagination.

Pelli's design answered the developer's call to express the «culture and heritage of Malaysia» by evoking Islamic arabesques and employing repetitive geometries characteristic of Muslim architecture. In plan, an 8-point star formed by intersecting squares is an obvious reference to Islamic design; curved and pointed bays create a scalloped facade that suggests temple towers. The identical towers are linked by a bridge at the 41st floor, creating a dramatic gateway to the city.

The structure is high-strength concrete, a material familiar to Asian contractors and twice as effective as steel in sway reduction. Supported by 75-by-75-foot concrete cores and an outer ring of widely-spaced super columns, the towers showcase a sophisticated structural system that accommodates its slender profile and provides from 14,000 to 22,000 square feet of column-free office space per floor.

Other features include a curtain wall of glass and stainless steel, sun shades to diffuse the intense equatorial light; a double-decker elevator system, transfer point on the 41st floor to accommodate the thousands of people who use the complex daily; and a concert hall and shopping center enveloped by nearly seventy acres of public parks and plazas.

In both engineering and design, the Petronas Towers succeed at acknowledging Malaysia's past and future, embracing the country's heritage while proclaiming its modernization. The end result, says Pelli, is a monument that is not specifically Malaysian, but will forever be identified with Kuala Lumpur.

6. Nanjing Greenland Financial Center

The **Nanjing Greenland Financial Center** is a 450-metre (1,480 ft) supertall skyscraper completed in April 2010 in Nanjing, China. The 89-story building features retail and office space in the lower section, and restaurants and a public observatory near the top. The tower's stepping is functional, helping separate these sections.

The mixed-use tower, which overlooks Xuanwu Lake, became the second tallest building in China and the 6th tallest building in the world when topped out in 2008. An observation deck on the 72nd floor, 287 m (942 ft) above ground, provides an unobstructed, panoramic view of Nanjing and the nearby Yangtze River, two lakes and the Ningzheng Ridge mountains.

Marshall Strabala and Adrian Smith, who also worked together to design Burj Khalifa, designed the competition winning building for the Nanjing Greenland Financial Center. The design was taken over by Gordon Gill. The complex was designed while all three of these architects worked at Skidmore, Owings and Merrill.

7. Willis Tower

Willis Tower, formerly Sears Tower, is located on Wacker Drive in the heart of the West Loop, Chicago's premier submarket and home to its largest corporations and commuter rail stations. The building was renamed Willis Tower in July 2009.

Completed May 3,1973, Willis Tower rises to a height to 1,450 feet.

The building held the record for the world's tallest building for 25 years until the Petronas Towers in Kuala Lampur, Malaysia were built in 1998.

In 1982, the antennas added to the building increased its total height to 1,704 feet. In 2000, one of the building's antennas was extended to 1,729 feet, making it

the world's tallest building to the tip of its antenna. The building held this title until early 2009 when Burj Dubai topped out at over 2,600 feet, making it the tallest man-made structure ever built.

Designed by the architectural firm Skidmore, Owings & Merrill for Sears, Roebuck & Company Willis Tower is one of the most recognizable landmarks in the Chicago skyline and in the world. The building contains approximately 3.8 million rentable square feet. The Property also features a 160-car executive parking garage. Other amenities include a world-class broadcast platform, tallest skydeck, full-service conference center, fitness facility, and exceptional technology features. The Willis Tower Conference Center located on the 33rd floor offers an upscale conference facility consisting of seven meeting rooms that provide a distraction-free meeting environment and state-of-the-art audio/visual equipment, Internet connectivity, and catering service. The Willis Tower Conference Center can accommodate groups up to 300 persons for a theatre-style meeting and as many as 250 people for a seated dinner.

The architect and structural engineer designed the Tower's curtain wall with a modernistic masterwork of glass and aluminum. The curtain wall system consists of bronze-tinted vision glass and black anodized aluminum spandrel panels captured in a striking black anodized aluminum framing. Granite panels, with aluminum-framed glass storefront windows, accent the ground level facade on the east, north and south building elevations. The structural framing consists of steel columns and beams in a «mega-module» system consisting of nine modules. The foundation system consists of belled, reinforced concrete caissons with reinforced caisson caps.

Willis Tower has one of the most complete life safety systems ever devised for a high-rise building. All steel is fireproofed. Automatic sprinklers cover each of the 4.5 million gross square feet of space. Duct-mounted smoke detectors are designed to pinpoint the source of the smoke and a computer-activated system will exhaust the smoke from affected areas. The self-contained backup emergency power supply supports the alarm system, fire pumps, communication system, emergency lighting and select elevators in the event of an electrical failure. There are four two-hour, fire-rated stairwells, one of which is specifically ventilated for smoke-free evacuation. Each stairwell has a phone every four floors to communicate with the Command Center.

8. Guangzhou International Finance Centre

Guangzhou International Finance Centre is a 103 story, 440.2 m (1,444 ft) tall scyscraper at Zhujiang Avenue West in Tianhe District at Guangzhou, China. The building was topped out at the end of 2008.

Construction of the building, designed Wilkinson Eyre, broke ground in December 2005. When complete, the building is used as a conference centre, hotel and office building. Floors 1 to 66 are used as office, floors 67 to 68 are mechanical equipment, floors 69 to 98 as a Four Seasons Hotel and in floors 99 and 100 is an observation deck. The hotel lobby is located on the 70th floor. The building was completed in 2010.

The building was previously known as Guangzhou West Tower and had a related project, the proposed Guangzhou East Tower which, at 475 m (1,558 ft), would have been even taller.

9. Jin Mao Tower

Jin Mao Tower - 1380 ft (421 m) 88 Floors.

The name of the landmark super-tall skyscraper, Jin Mao, literally means «Golden Prosperity Building» Jin Mao is a visiting card of Shanghai. Currently ranked the 6th tallest in the world, it was designed by the Chicago based Skidmore, Owings & Merrill and constructed in 1999. It is located in the Lujiazui area of the Pudong district of Shanghai, People's Republic of China. The architecture ingeniously combines elements of traditional Chinese culture with the modern architectural styles of the time, which makes it one of the well-constructed buildings in China.

The proportions of this structure revolve around the number 8, which according to Chinese belief, signifies prosperity.

It houses the very luxurious Shanghai Grand Hyatt hotel and several offices. The construction cost is estimated to be 530 million dollars. The tower has several exhibition halls, banquet halls, entertainment and an observation deck on the 88th floor that can fit about 1000 tourists. The daily maintenance of this tower is reported to be an unbelievable US $121,000.

The tower is built around an octagon-shaped concrete shear wall core surrounded by 8 exterior composite super columns and 8 exterior steel columns. Three sets of 8 two-story high outrigger trusses connect the columns to the core at six of the floors to provide additional support. The foundations rest on 1,062 high-capacity steel piles driven 83.5 m deep in the ground to compensate for poor upper-strata soil conditions. The building employs an advanced structural engineering system of wind and earthquake engineering which fortify it against typhoon winds of up to 200 km/h and earthquakes of up to 7 on the Richter scale.

The exterior curtain wall is made of glass, stainless steel, aluminium, and granite, and is criss-crossed by complex latticework cladding made of aluminum alloy pipes.

10. Empire State Building

More than any other building in the world, the Empire State Building represents the ambition of humans to build towers that reach for the skies. It probably is New York's best known building and is prominent on many postcards.

The Empire State Building also features in many films, but the film that made it even more famous then it already was, was the classic King Kong in 1933. Even today, though the building has been stripped from its title of the world's tallest building, it is a symbol of New York itself visited by 2 million people each year.

The building had 64 elevators (now 73) and was constructed in only 1 year and 45 days. The skyscraper towered over the neighborhood with its height of 381 meter (1250 ft). As the Empire State Building was one of the last skyscrapers built before the Great Depression hit the real estate market, it wouldn't be topped until 1972, when the twin World Trade Towers dethroned the Empire State Building as the world's tallest building.

The Empire State Building is built on a full city block. Much of it was occupied by the Waldorf-Astoria Hotel, which opened in November 1897 as the city's largest hotel with 1050 rooms. It was one the most prestigious in New York and attracted an upper-class clientele. At the end of the 1920s however, the grand

and plush design of the hotel had gone out of style and Waldorf-Astoria decided to build a new, larger hotel.

After the site was cleared, construction started March 17, 1930. Thanks to an efficient design and standardized work - similar to an assembly line - the building would rise at an average of about four and a half floors a week, faster than any other skyscraper at the time. The building was officially inaugurated on May 1, 1931 in the presence of governer Franklin D. Roosevelt.

The Empire State Building was designed by William Frederick Lamb of the architectural firm of Shreve, Lamb, and Harmon. Lamb, influenced by Raymond Hood's Daily News Buildings came up with a fairly simple design, defined by requirements such as the budget, time limit and New York City's 1916 zoning law. The building would have a classical composition of a 5 story base, a large tower with setbacks (required by the city's zoning law) and a monumental spire. The limestone facade had little or no ornamentation.

What makes the design so great is that for all its simplicity and sheer bulk it has a perfect composition and massing, giving the building a certain grandeur.

The building is topped by an enormous spire. It was designed as a mooring mast and would enable dirigibles such as zeppelins to anchor at the top of the building so that passengers could embark or disembark. This proved to be very unpractical however due to the instability of zeppelins and after the Hindenburg disaster in 1937 the idea was shelved.

The Empire State Building was one of the last skyscrapers completed in New York before the Great Depression hit the real estate market. Demolition of the existing building at the site started just weeks before the stock market crash of 1929. After 1933 - with the construction of Rockefeller Centre - no tall skyscraper would be built in the city for almost two decades.

As a consequence the Empire State Building held its title of the world's tallest building for more than 40 years. But the Great Depression also caused a collapse in the demand for office space. The owners had such a difficult time leasing office space that the building became known as the 'Empty State Building'. It would take until the end of the 1940s before the real estate market was fully recovered and in the early 1950s the Empire State Building even became the most profitable building in New York City.

You can visit the Empire State Building's observatory on the 86th floor from where you have a magnificent view over the city of New York. The Empire State Building is situated south of Midtown, away from the skyscraper clusters in midtown and in the financial district downtown, so this is one of the few places in Manhattan where you have an open 360 degrees view. For the best view of the Empire State Building however, you better go to Rockefeller Center's observatory.

Part 2

Unusual buildings

1. Green Buildings

As the days go by, a growing concern about the planet is coming into existence. Stearns Custom Homes specializes in helping new home owners not only understand the importance of these two things, but also to bring these two things into fruition in the design and completion of a new custom home.

Not only are you contributing the health of the environment, but you are also reducing the cost of those monthly bills. Building a green home is good for the environment, and good for your wallet - good for the planet, and good for the self.

Green Building, also known as green construction or sustainable building, is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from sitting to design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort.

While the practices, or technologies, employed in green building are constantly evolving and may differ from region to region, there are fundamental principles that persist from which the method is derived: Sitting and Structure Design Efficiency, Energy Efficiency, Water Efficiency, Materials Efficiency, Indoor Environmental Quality Enhancement, Operations and Maintenance Optimization. The essence of green building is an optimization of one or more of these principles.

On the aesthetic side of green architecture or sustainable design is the philosophy of designing a building that is in harmony with the natural features and resources surrounding the site. There are several key steps in designing sustainable buildings: specify «green» building materials from local sources, reduce loads, optimize systems, and generate on-site renewable energy.

Reducing environmental impact

Green building practices aim to reduce the environmental impact of buildings. Buildings account for a large amount of land use, energy and water consumption, and air and atmosphere alteration. Considering the statistics, reducing the amount of natural resources buildings consume and the amount of pollution given off is seen as crucial for future sustainability. The environmental impact of buildings is often underestimated, while the perceived costs of green buildings are overestimated. A recent survey by the World Business Council for Sustainable Development finds that green costs are overestimated by 300 percent, as key players in real estate and construction estimate the additional cost at 17 percent above conventional construction.

Goals of green building

The concept of sustainable development can be traced to the energy (especially fossil oil) crisis and the environment pollution concern in the 1970s. Green building movement in the U.S. originated from the need and desire for more energy efficient and environmentally friendly construction practices. There are a number of motives to building green, including environmental, economic, and social benefits. However, modern sustainability initiatives call for an integrated and synergistic design to both new construction and in the retrofitting of an existing structure. Also known as sustainable design, this approach integrates the building life-cycle with each green practice employed with a design-purpose to create a synergy amongst the practices used.

Green building brings together a vast array of practices and techniques to reduce and ultimately eliminate the impacts of buildings on the environment and human health. It often emphasizes taking advantage of renewable resources, e.g., using sunlight through passive solar, active solar, and photovoltaic techniques and using plants and trees through green roofs, rain gardens.

Many other techniques, such as using packed gravel or permeable concrete instead of conventional concrete or asphalt to enhance replenishment of ground water, are used as well.

2. Green architecture of city

Planting of greenery cities - one of actual problems of our time. Different projects, realized in Russia and in the European countries, are called to help city municipal services, the directors of enterprises, architects and landscape designers to incarnate in life the initiatives on planting of greenery.

Large cities transformed to the middle of 20^{th} age in «stone jungles», aggressive in relation to a man. In the whole world already a long ago came to the conclusion about the necessity of harmonization of city space. Flowers on the streets of European cities became the general and ordinary phenomenon, but they not at all cheer up less than from it . Too densely standings houses and asphalted streets sometimes do not abandon a place for laying out of flower-gardens. And here the vertical planting of greenery comes for help. Suspended floral containers, balcony boxes for plants, the floor bowls of unusual forms become the necessary attribute of many city streets today. They allow to economize space and do a little flowering oasis almost any corner of city.

Variants «revivals» facade

But such traditional measures the vertical planting of greenery of the European cities is not limited to. A facade , thickly strung by lianas, left off to be exceptional belonging of out-of-town villa. French, German, Swiss architects, workings in this direction, as early as 80s 20^{th} ages created the standards of combination of architecture and vegetation, and in our time this practice got wide distribution.

In office building in Santyago (Chile), built Enrike Braunom and Boreas of Uydobro, lianas, risings on the trellis-works of facade, remind jalousies, protecting internal apartments from a sun.

American architect Andzhela Danadeva converted the atrium of the recently built shopping center in Seattle in real hangings, more precisely, terrace gardens, where it is possible to find a little waterfall even. As a result this garden became the favorite place of meetings for the habitants of city.

Antifunctionalism

Telling about «green architecture» it is impossible not to mention work of Fridenraykha Khundertvassera - nearly brightest figure in architecture of end of 20th age. Khundertvasser was convinced an antifunctionalist - projects built by him deny everything, that added in modern architecture by an urbanism and standardization. A house, built Khundertvasserom in Vienna from 1977 to 1986, became by the architectural manifest.

For us he is interesting foremost that on all flat elements of building - roof, balconies, terraces — earth was poured and trees, bushes, flowers and simply lawn grass, are landed. As a result building looks as the forest with unusual buildings bedded in the middle of. So principle of harmonious union of man with nature, which Khundertvasser preached on words and in business, works.

«Green roofs», propagandized by Khundertvasser, behave rather to the area of the horizontal planting of greenery. However lately architects carry out tests and on planting of greenery of vertical surfaces. So, English architects Khizer Ekroyd and Dan Kharvi began the experiments from that placed the seed of plants on the wall of the abandoned shanty in the medieval mountain hamlet of Italy. In 2003 Kharvi and Ekroyd adorned a grass the interior of the neglected church of Dilston-grouv in London, in a year - are walls of burial vault XVIII ages on the city cemetery of Riga. Then, already in Sweden, the couple of architects presented a floating lawn on the court of public.

«Vertical gardens»

For other side of La-mansh lives and works the French botanist and designer Patrick Blank, known in the whole world as an inventor of «vertical gardens». Usually hanging gardens are traditional horizontal trays, gap-filling earth and set on a vertical frame above each other. In Blank's «vertical gardens» no trays are present, and all thickness of setting, not counting escapes, does not exceed a few centimeters. And its weight is small enough and does not create loadings on the walls of structure. The whole system of fastening of plants variety of which almost restrictedly nothing is here foreseen. Such garden is a metallic frame, fastened on a wall. Landing to 30 different plants on every square meter of composition, it is possible to create surprising on relief vertical landscape.

Through the network of tubes, hidden after a plastic, nourishing solution, containing mineral elements, necessary for their growth, acts to the plants. A building wall, hidden after such decoration, is not moistened thus - water to it does not pass and inflicts no damages.

The first composition Patrick Blank created in 1988, and since his creations adorned the walls of a few ten of buildings. It is hotels, shops, headquarters of different companies. Thus «vertical gardens» found application both outside of buildings and from within. It is even possible to find them in a few private houses.

The latest creation of Patrick Blanka decorates the new Paris museum of Kuay Branl. It was opened only in June, 2006 and at once became one of sights of Paris. And on a current year realization of a few projects of Form is set in Malaysia, Qatar, Belgium, Vietnam and Korea.

3. Bionic architecture

Bionic architecture is a movement for the design and construction of expressive buildings whose layout and lines borrow from natural (i.e. biological) forms. The movement began to mature in the early 21st century, and thus in early designs research was stressed over practicality. Bionic architecture sets itself in opposition to traditional rectangular layouts and design schemes by using curved forms and surfaces reminiscent of structures in biology and fractal mathematics. One of the tasks set themselves by the movement's early pioneers was the development of aesthetic and economic justifications for their approach to architecture.

There's a look at some of the most incredible examples of bionic architecture and some of the leading bionic architects in the world.

Anti-Smog Building. This is one of the projects from Vincent Callebaut, a young French architect who is making some serious waves in the world of bionic architecture. It's a mixed-use building, erected over abandoned railroad tracks in Paris and turn it into useful recycled energy resources, and is designed using green technologies that actually suck the smog from the streets of. A natural lagoon, as well as a rooftop view of Paris is both bonuses that make people want to spend time in this eco-friendly building.

The Ascent at Roebling Bridge. This building was constructed by Daniel Libeskind, an architect best known for winning the Masterplan competition to rebuild the World Trade Center in New York City. This building isn't of quite such historic importance, but it reflects the architect's goals in relation to bionic architecture. The sloping crescent roof

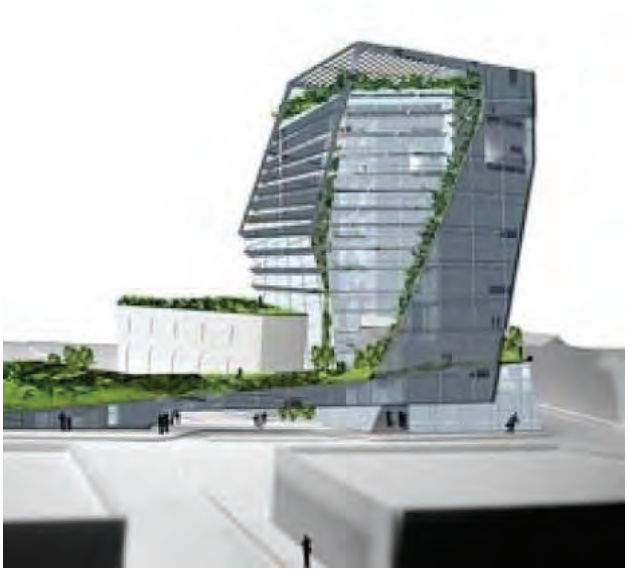
takes design cues from the natural environment and also offer residents of the building an uncluttered view of the city. The natural tones of the building were specifically chosen to reflect the earth and sky of the area.

Ark of the World. The buildings created by Greg Lynn are based on a type of architecture for which he coined the term 'blobitecture'. This type of building relies on the 'blob-like' shapes of amoebas and other naturally occurring forms to create the basic bulbous design of the buildings. One of the best examples of this is his plans for the Ark of the World, a building located in the Costa Rica rainforest which is planned to serve as an eco-center and location of eco-education. A tensile fabric roof serves as a platform for people interested in looking out over the rainforest and a column-based water garden keeps the place cool.

Treescraper Tower of Tomorrow. Leading architect William McDonough shows his commitment to creativity, intelligent building and designs that feed ecosystems. As the name suggests, this is a skyscraper that has been designed in a way that mimics the growth and change of a tree. A curved, aerodynamic building, it uses minimal construction materials, while making maximum use of the enclosed space. All of the water in the building is recycled in a manner similar to that of how a tree would re-use water and nutrients. Wastewater from sinks flows into the building's three gardens and the water from the gardens is subsequently re-used in the toilets.

Urban Cactus is a 19-storey residential building, shaped in a way that is inspired by an irregular pattern of outdoor spaces. Natural sunlight and a unique design on the harbor give it the semblance of bionic architecture and of course its interesting and curvy aesthetics make it an appealing building.

Turning Torso is the tallest building in Scandinavia and was created by Santiago Calatrava, an architect who has taken a lot of flak from people who say that his designs aren't realistic. There is some concern over the longevity of his designs, despite the fact that they are built in such a way as to feature traits natural to the environment. It is unclear at this point whether or not those fears are warranted. What is clear, is that he's got a unique design perspective that is featured in buildings (such as this one) located all around the world.



Jumptown Building aims to become the greenest building in the already-green city of Portland, Oregon. It’s already getting assistance from leading Malaysian architect Ken Yeang. Green features of this design include solar power, sewage and storm water recycling, use of sustainable materials and a unique garden design which turns a rooftop garden into one which cascades down the side of the building.

4. The Eden

The Eden Project is a visitor attraction in Cornwall in the United Kingdom, including greenhouse. Inside the artificial biomes are plants that are collected from all around the world.

The complex is dominated by two gigantic enclosures consisting of adjoining domes that house plant species from around the world. The domes consist of hundreds of hexagonal and pentagonal, inflated, plastic cells supported by steel frames. The first dome emulates a tropical environment, and the second a Mediterranean environment.

The project was conceived by Tim Smith and designed by architect Nicholas Grimshaw and engineering firm Anthony Hunt and Associates (now part of Sinclair Knight Merz). Davis Langdon carried out the project management, MERO designed and built the biomes. The project took 2½ years to construct and opened to the public on 17 March 2001.

Layout

Once into the attraction, there is a meandering path with views of the two biomes, planted landscapes, including vegetable gardens, and sculptures that include a giant bee and towering robot called RSA WEEE Man created from old electrical appliances.

Biomes

At the bottom of the pit are two covered biomes:

The Tropical Biome, covers 1.56 hectares (3.9 acres) and measures 55 meters (180 ft) high, 100 meters (328 ft) wide and 200 meters (656 ft) long. It is used for tropicalplants, such as fruiting banana trees, coffee, rubber and giant bamboo, and is kept at a tropical temperature and moisture level.

The Mediterranean Biome covers 0.654 hectares (1.6 acres) and measures 35 meters (115 ft) high, 65 meters (213 ft) wide and 135 meters (443 ft) long. It houses familiar warm temperate and arid plants such as olives and grape vines and various sculptures.

The Outdoor Biome (which is not covered) represents the temperate regions of the world with plants such as tea, lavender, hops, hemp and sunflowers.

The covered biomes are constructed from a tubular steel space-frame (hex-tri-hex) with mostly hexagonal external cladding panels made from the thermoplastic ETFE. The cladding panels themselves are created from several layers of thin UV-transparent ETFE film, which are sealed around their perimeter and inflated to create a large cushion. The resulting cushion acts as a thermal blanket to the structure. The ETFE material is resistant to most stains, which simply wash off in

the rain. Although the ETFE is susceptible to punctures, these can be easily fixed with ETFE tape. The structure is completely self-supporting, with no internal supports, and takes the form of a geodesic structure. The panels vary in size up to 9 meters (29.5 ft) across. The entire build project was managed by McAlpine Joint Venture.

The Core

It provides the Eden Project with an education facility, incorporating classrooms and exhibition spaces designed to help communicate Eden's central message about the relationship between people and plants. Accordingly, the building has taken its inspiration from plants, most noticeable in the form of the soaring timber roof, which gives the building its distinctive shape.

Grimshaw developed the geometry of the copper-clad roof in collaboration with a sculptor, Peter Randall-Page, and Mike Purvis of structural engineer Anthony Hunts. The copper was obtained from traceable sources. The services and acoustic design was carried out by Buro Happold.

The photovoltaic array on the roof of the core building was arranged in an inclined circle for aesthetic reasons. However this arrangement ensures that more than half of the panels never receive direct sunlight. At the time of installation the electrical engineer making connections deemed that it was not worth while to

connect these panels, as their potential to generate electricity was so limited. The value of the panels at the time of installation was around £260,000.

Environmental aspects

The Eden Project includes environmental education focusing on the interdependence of plants and people; plants are labeled with their medicinal uses. The massive amounts of water required to create the humid conditions of the Tropical Biome, and to serve the toilet facilities, are all sanitized rain water that would otherwise collect at the bottom of the quarry. The only mains water used is for hand washing and for cooking. The complex also uses Green Tariff Electricity — the energy comes from Cornwall, which were among the first in Europe.

In December 2010 the Eden Project received permission to build a Geothermal electricity plant which will generate approx 4MWe, enough to supply Eden and about 5000 households.

5. The smallest house in the world

The typology of deficit

Small-scale architecture has its own, relatively multi-furcated structure of types. Each piece of small stuff is a product of the extreme conditions in which it was designed. Usually, this is a shortage of something or other -space, material, funds, time, or even some physical limitation of the client such as, for instance, his being disabled. For this reason, the various examples of small-scale architecture may be divided into types according to the limitation that gave rise to them. However, it should be made clear from the start that in many cases the limitation is one imposed by the architect himself/herself. This is, after all, a lucid genre, which may in many respects be described as architectural posing.

One of the main limitations - and one that is so untypical for the history of architecture and yet so natural for today - is the short-lived nature of materials. Architecture is rapidly turning into something like disposable packaging; and this is giving rise to some strange creations. Take, for example, the temporary pavilion by Atelier Kempe Thill, where the walls are made of packing cases - like Soviet boxes for beer bottles, only white -placed one inside the other. The cases have turned out to be an excellent construction material. On the one hand, their matt surface creates a pleasant glittering effect; and, on the other, no special skills are required during construction and the structure can easily be transferred to another plot of land.

Some history

Toronto's Little House was built in 1912 by well-known contractor, Arthur Weeden. Mr. Weeden was born in England and migrated to Canada in 1902. For a short time, he was Superintendent of the old Lighthouse Mission and later became one of the pioneer builders in Toronto's west end. Located in what was known as the Earlscourt District, Day Avenue is home to many of Arthur's building projects. During the street's development, Lot 128 was conceived as a laneway for the neighboring home. However, the curb was never cut by the City to allow vehicular passage from the street.

Observing this, Arthur decided that «in order to use the land, I would build on it» (Weeden, Toronto Sun Telegram, 1939). After completing the laneway house, he and his wife lived in it for 20 years. After his wife passed away, Mr. Weeden, 77 years of age at the time of the Sun Telegram article, lived in the house for 6 more years, during which time he tended to the vegetable garden in the rear of the house, growing tomatoes, cabbages, Swiss chard, rhubarb and some flowers. At the time, a house on Sydenham street was said to be the smallest, but Weeden discredited this claim by noting, «it has a frontage a foot and a half longer than his», and was not a complete house as it did not have electricity and other conveniences. The other disputed «smallest house» is located at 383 Shuter Street, but it too is larger. Eight inches wider, to be exact Arthur Weeden on the porch of The Little House, 1939.

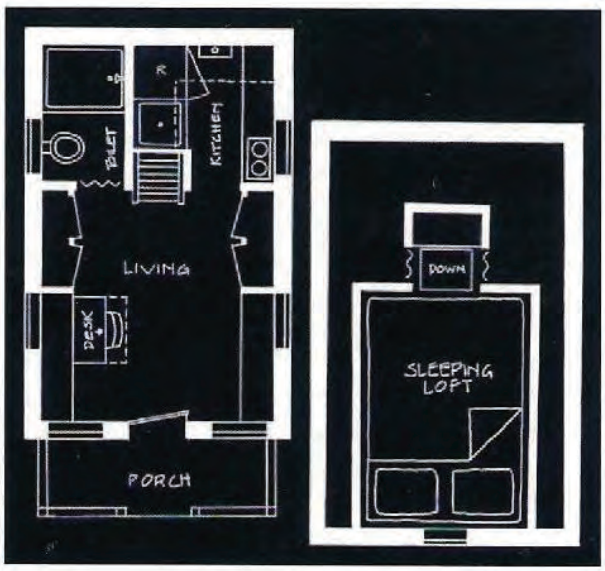
One year before Arthur Weeden began construction on his home, Sir Henry Pellatt broke ground for his home, Casa Loma, completed in 1913, this was the largest residence in Toronto. It is interesting that during this two years span, both the largest and smallest homes in the city were constructed. After a market value assessment in 1923, Sir Henry was prompted to move out, and it has been a tourist attraction ever since. 128 Day Avenue, on the other hand, has always been occupied and has changed hands numerous times over the years. After being sold by Mr. Weeden, it was inhabited by several different families (although information on them was difficult to track down), including one elderly man who now lives down the street. He visited during our renovation and recounted a story of the time he lived in the house: he came to Canada from Italy, after serving as an officer in his country's army. Working in the construction industry among other jobs, he lived with his family in the house for 15 years. He claims to have lived there with his wife and three children It was not clear if his story was completely accurate, however, we do know the most recent owners (a couple), who came to Toronto in 1996 from Brazil, lived in The Little House for over 10 years. While in the home, they made many improvements: updated flooring, a new roof, new electrical, new drywall and insulation in the bedroom and living room. The couple moved out in May, 2007, when the Little House was sold.

The current owners continued with renovations and upgrades, with a view towards making the space as useful, enjoyable and comfortable as possible. In the fall of 2007, media interest continued and this website was created so that people from all over the world could visit The Little House, even has it's own song by

Maria Lee Carta. The song was recorded at Sweet Fire Studios in Brooklyn, New York on August 14, 2008.

Examples of the smallest houses

a)



Details about the house

•The house occupies a total of 96 square feet, which is smaller than most people's bathrooms.

•The house comes fully equipped with a desk and fireplace in the main room; a kitchen; wet bath; and a loft upstairs.

•For its small size, the house has a large amount of storage space, thanks to its clever design.

•A house like this costs approximately $40,000 to buy.

•The house is wired for electricity and ready to be plugged in through a plug on the outside

•The house could also be powered by using a standard AC plug-in, or even better, via a solar electric system with an inverter.

•There are two-burner stove, an under-counter refrigerator, a bar sink, an RV on demand hot water heater, and a propane boat heater.

Who owns the house and why?

Jay Shafer. He's the creator and resident of the smallest house in the world, which he has proudly named Tumbleweed. Jay is an artist and architect, who lives in his home near San Francisco. He sells plans for, and builds, tiny homes in sizes ranging from an extremely small 50 square feet to a practically roomy 500 square feet. Jay has been living in a house smaller than some people's closets since 1997. Can you imagine living in something so small for so long? Jay's decision to inhabit just 96 square feet arose from his concerns he had about the impact a larger house would have on the environment, and because he does not want to maintain a lot of unused or unusable space.

b) British and German scientists have jointly established an unusual house, which according to functional features like a cross between a barrel of Diogenes and the hut on chicken legs.

Mobile home has the form of a cube with sides of 2.6 meters. Ceiling height is 198 cm and weight of the house is 2.2 tons. This is probably the most compact home in the world. Nevertheless, in this house fits two built-in compact beds, closet, kitchen bar with sink, folding table, refrigerator, microwave, heating and ventilation elements. Design House made a modest but pleasant style, the main materials are wood processing, plastic and aluminum. Ideal accommodation for an ascetic can be transported by car anywhere, and are not accessible by car - two-tone cube can be delivered by air. It is such a dwelling from 30 thousand dollars and has many additional modifications.

c) The house was built in the center of Nakano in Tokyo, about 15 square meters dimension. Constructed it Yasuro Yamashita, who successfully uses his architectural ideas in conjunction with space savings. Unit rooms, and furniture were designed by him and creates the illusion of space that seems larger than it really is.

d) While large investors and large architectural companies compete among themselves to see who will make the building higher, wider, more expensive, the little people and small companies have their concerns. Here, for example, the company CSD Archtecten built in Antwerp, four-story house, which quite possibly is the smallest modern four-storied home in the world. Place is quite suitable for normal living house on a piece of land three of four meters - not a trivial task. This is not the slums of Mumbai, where people live in much more cramped conditions. This - the center of Antwerpen. There needs modern approach to the construction of modern housing. But the company CSD Archtecten coped with the task became to her, the highest rating. She turned four-story building with total area of 50 square meters (12.5 square meters per floor). Here is ail that is necessary for modern man to life. On the ground floor there is a garage for the car, on the second - bedroom, toilet and shower, on the third - the kitchen, on the fourth – a living room, combined with the Cabinet.

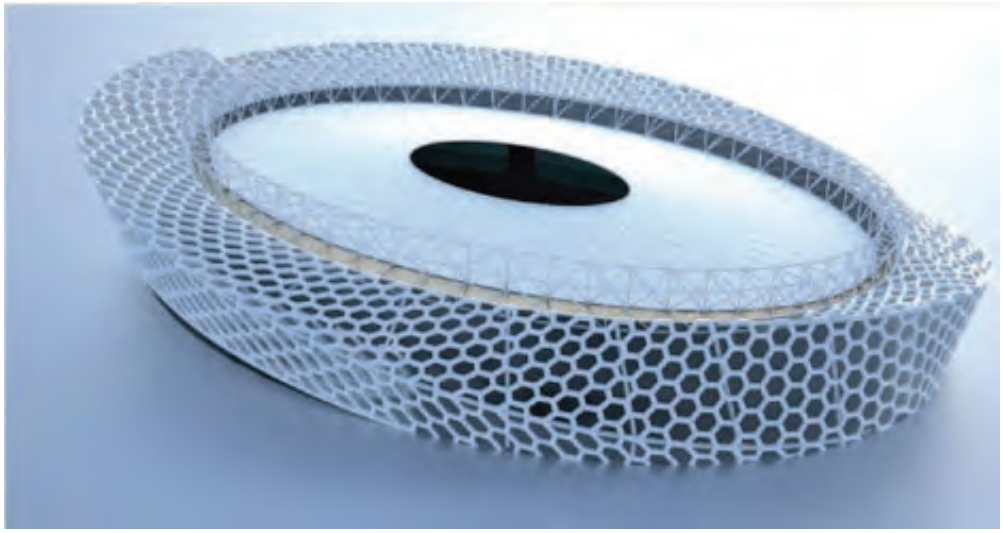
Small houses in Russia

The established practice for building small private houses in Russia allocates almost no role to architects. What usually happens is that the owner himself plays the part of architect and the main challenge is thought to be that of finding responsible and inexpensive builders with experience of constructional methods. Architects themselves are often not interested in resigning small houses, a business which they consider unprofitable.

There are, though, definite signs of movement in the field of small house resign. First, the Russian middle class gradually coming to the conclusion that spending money on an architect is not necessarily such a bad idea - in final. It's more convenient to in a well-designed house and expenditure on maintenance and use is considerably reduced. This is the view of a client from Samara who has played the services of architect.

This 230-m^2 house we use, consists of two linked structures founded for the older and younger generations of a single family. Fathers and sons are dispatched to different levels. At minus 1.5 meters there is a shared 'service area' containing storage space, boiler room, and sauna. Half a level higher to the left is an apartment for the parents; a further half a level higher to the right is an apartment for the children. Each has its own entrance and faces its own part of the plot. In this way, people with different timetables can perfectly comfortably live together and yet apart under the same roof.

On the other hand, architects are beginning to acquire sufficient experience of technologies and types of housing to make designing small houses a financially justifiable proposition. Thus Concept Design, which is famous for its luxury villas, has established a separate department dealing in design of houses for the middle classes, an area of specialization which Dmitry Dolgoy, the firm's head, considers to be both important and interesting. Concept Design produces a high-quality product for an acceptable price; the original constructions have been developed and perfected in the design of grand houses and the decorative elements, for all their intricacy and diversity, are technically fairly straightforward and inexpensive. In this issue of PR we publish houses designed by Concept Design in the 80 m^2 to 190 m^2 size band. These are low-cost houses that nevertheless maintain links with the architecture of this firm's larger projects with regard to structural engineering and decorative techniques. These buildings are distinguished by having well-developed terraces. In the summer, the terraces are an important link between the inside of the house and the garden. In winter, the wooden decks form an extensive territory outside the house that does not have to be cleared of snow.



6. Performance space

http://www.bdonline.co.uk/indexbd.asp?navcode=2277

Various Architects' temporary performance space for a world tour

19 December 2008

How Norway's Various Architects created a lightweight, demountable performance venue for client Arts Alliance.

The challenge: To design a 3,500-capacity mobile performance venue with a clear internal volume

The solution: A fabric roof supported from a bicycle wheel structure, with the cables tensioned from a high-level radial truss formed from standardized components.

The concept:

The client, digital film distributor Arts Alliance, asked for a lightweight, easily transportable venue to house its ID: Identity of the Soul film installation on a 2009 worldwide tour.

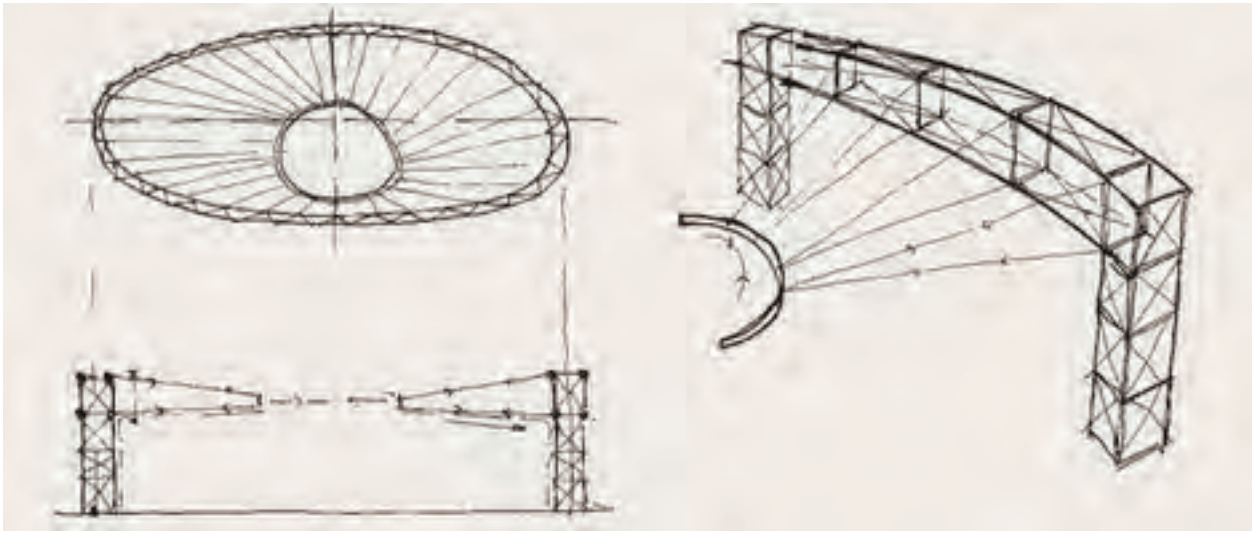
The brief specified a structure that would meet the client's technical requirements for video projection and surround sound, and accommodate up to 3,500 people without internal support impeding the view to the stages.

Oslo-based Various Architects proposed a dynamic oval form of 90m x 60m ranging between 10 and 17m in height and covering 3,900sq m. The 2,000sq m performance space was covered by the bicycle wheel roof, with the radial truss supported on 12 columns spaced to frame the five 12m x 7m video screens and support the audiovisual equipment.

This was surrounded by the public plaza and the back-of-house areas sited within an inflatable PVC outer skin, braced with a lightweight frame.

The five-screen cinematic performance, based on poems by Henrik Ibsen and Mahmoud Darwish, is scheduled to come to London 2009.

Stephen Melville is a director at Ramboll Whitbybird and Ross Smith is a design engineer.

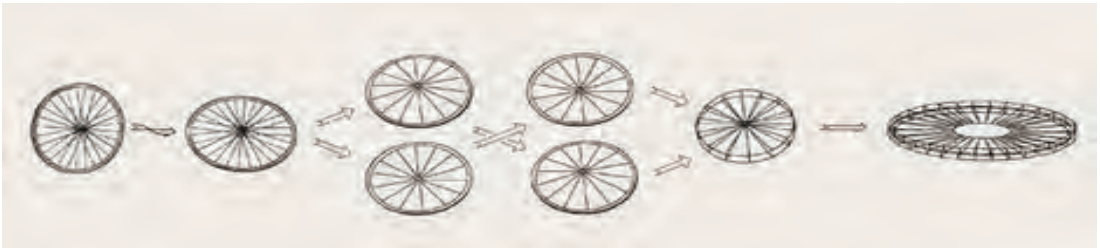


Step 1 Designing the roof

As structural engineer, our first step was to assess a number of roof options, including cantilevering beams, steel or aluminum trusses, tensile canopy structures and cable net structures. We chose a fabric roof supported on tensioned cables as this would give the lightest structure with fewer components to erect — a quick assembly and easily transportable solution that was capable of providing a large, clear span without intruding into the theatre space.

Step 2 The bicycle wheel

The bicycle wheel concept. Two halves of the wheel are separated, then crossed to give a wider outside ring.

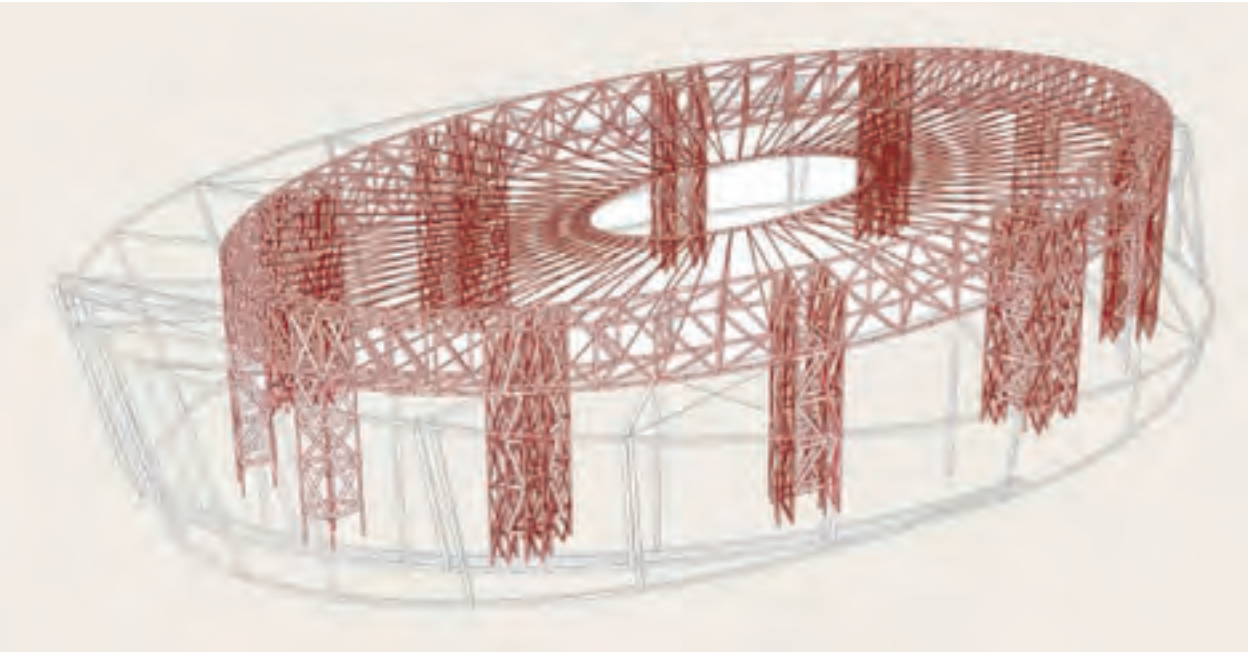


The roof of the inner drum was designed according to the principle of the bicycle wheel.

We separated the two halves of the horizontal wheel arrangement, then crossed them over to give a wider outside ring and a single point in the centre of the roof.

The radiating spokes are made of tensioned cables running from an outer ring beam, which acts in compression to an inner ring beam in tension. As the majority of the roof is acting in tension, small, efficient, lightweight sections can be used.

Step 3 Optimizing the truss



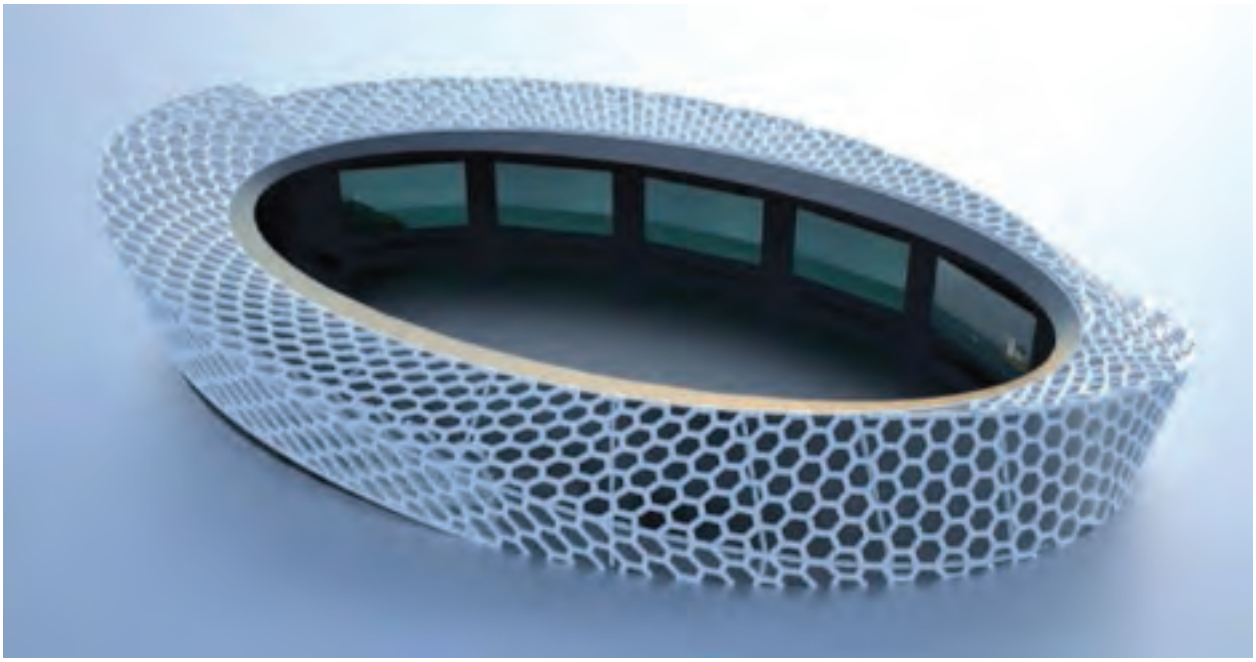
The venue's 12 internal columns are connected to the radial truss, and the roof is moved up them until it locks into place.

The force and deflection of each of the elements within the roof depends on the interaction of the loading (such as wind, snow, its own weight), the geometry and pre-stress applied in the cables.

The elliptical shape induces different methods of structural behavior within the truss. At the sharply curved ends of the truss, the force is resisted in an arching action; it behaves like an arch and takes the loads axially through the truss and transfers it to the structural columns. Here, the ring truss will be at its narrowest (2m) as no benefit can be gained from increasing the width.

In the gently curving central section, the force is resisted in bending. Here, the truss bends between the structural columns, and this is how it transfers the force. Increasing the width in this location has a significant beneficial effect on deflection. Widening the truss to 4m at this location efficiently maximizes the benefit to deflection while minimizing the size of truss and amount of material used.

Between these two locations, there is an interaction between the two forms of structural behavior, meaning the truss tapers from 2m at the curved ends to 4m in the centre.



Step 4 Transportation and erection

To facilitate the transportation of the structure, the roof and the compression truss will be broken down into elements that can fit into standard shipping containers and be manually moved into position.

The completed venue will need to be erected in less than two weeks; the number of connections and elements therefore has to be kept to a minimum. Erection is also made easier by standardizing as many of the elements as possible.

The radial truss will be attached to each of the 12 internal columns with special connections that allow the whole roof, which is assembled at floor level, to “climb” up the columns and lock into position.

Step 5 Producing the mock-up

A CGI of the completed mobile venue as it might appear in New York’s Central Park.

After we completed the design, we produced a full-sized sample panel for the inflatable skin. This allowed us to develop a suitable manufacturing process and confirm our estimate of the time required for inflation. It also allowed us to see how the structure would perform and feel, and to make a few adjustments to improve the appearance and performance in the final structure.

7. Hadid’s Chanel pavilion

Inspired by the iconic Chanel handbag, Zaha Hadid’s Mobile Art structure reshapes the way polymers can be used by architects

Fibre-reinforced polymer (FRP) composite panels provide the sleek building Chanel handbag.

They say : «plastic is not so much a substance as the notion of infinite remodeling».

The pavilion is clad in 400 FRP panels, each with a unique digital geometry. The panels are doubly curved and some engage in a swift transition from the convex to the concave. The panels were manufactured in the UK by Stage One, a company whose roots lie in producing sets and structures for events including the Olympics in Sydney and Athens. FRP was selected for the Chanel pavilion for its formability, robustness, lustrous finish and above all lightness, as the pavilion needs to be transported to each venue.

Project architect Jens Borstelmann observed: “We have developed a material matrix for the facade’s cladding that analyzed the benefits of various materials with regard to robustness, weight, visual quality, control of shape and tour ability (handling, size of panels, maintenance). FRP was chosen as it had the best overall performance on those criteria.”

Zaha Hadid’s Chanel Contemporary Art Container in New York’s Central Park in 2008.

The pavilion has a toroidal-like form wrapped around a central daylight internal court, however this is not a geometry optimized to make repetitive geometric elements, the form of the pavilion has been explored and delineated by the architects. Visitors are invited to enjoy, even relish the geometric precision delivered by the FRP cladding supported by an internal and equally curvilinear steel frame. The central courtyard is daylight via ETFE cushions, which were considered as tour able as the FRP by the architects.

Cladding the pavilion

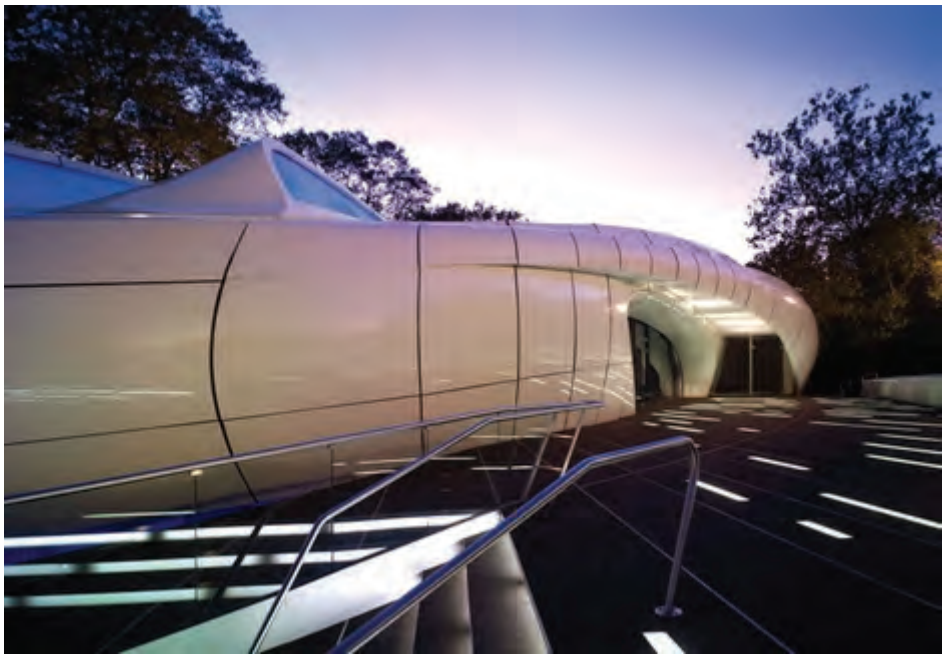
The FRP panels for the Chanel pavilion are detailed as a rain screen with the waterproofing and insulation provided by an unseen blanket-like construction. The wall panels range in size and are approximately 1.5m x 2m while the roof panels are 2m x 4m.

The panels were engineered by Optima Project using finite element analysis optimizing the laminate construction, while achieving the stiffness required by the performance specification for the most exposed venue. The panels are reinforced by glass fibers in combination of biaxial stitched cloth and chopped strand mat. The glass fibers are held in a matrix of fire retardant polyester resin. The panels have sandwich construction with a 5mm-thick core of low density, non-woven

continuous strand mat containing micro balloons (tiny plastic balls) to achieve a high bending stiffness to weight ratio.

FRP panels can be readily detailed to provide a high level of thermal insulation.

The FRP panels are sprayed with a high gloss pearlescent white acrylic paint. This glossy finish is visually very demanding, revealing the geometry of each FRP panel and the accuracy with which it has been made. The individual moulds for each panel were CNC machined from polyurethane foam, a cost-effective mould material. The panels were sanded by hand after they were de-moulded to achieve the fine finish. The internal lining of the pavilion is primarily formed of FRP panels that have been class one fire rated in accordance with British Standard.



The fibre-reinforced polymer composite panels are finished with a high gloss coating.

Architect Alan Brookes in his 1985 book Cladding of Buildings, states that one of the advantages of polymer composites is that they can be manufactured by unskilled labor. Experience, however, has proved this wrong. The key to successful fabrications in polymer composites is skilled operatives and precise quality procedures.

Before the pavilion was shipped to the first venue, Hong Kong, a trial assembly was undertaken at Stage One's works in North Yorkshire. This included the erection of the complete steel frame and 50% of the FRP cladding. This was considered sufficient to test the accuracy and buildability of the FRP panels. Once dismantled, the components were then shipped using a combination of sea and air freight, subsequent journeys have been by sea alone. Through 24-hour working the pavilion was erected in Hong Kong in just four weeks.

It's all in the bag

The pavilion housed work by 20 international artists including Tabaimo, Lee Bul and Leandro Erlich all inspired by Chanel's quilted chain-strap handbag,

which first appeared in 1955 and was reissued in 2005 by fashion designer Karl Lagerfeld. The pavilion is a flowing spiral of space. This is a personalized and skillfully crafted spatial journey, a redefinition of dancing around the handbag.

The global financial crisis has put the pavilion’s world tour on hold, though, and it is currently being stored in the UK.

8. House with landing stage at Zavidkin Mys', Moscow, Pirogovo

This house in the resort of Pirogovo is a vivid example of a new way of interpreting the Soviet architectural Avant-garde. The house's sculptural shape is immediately reminiscent of two works by Konstantin Melnikov: the pronounced diagonal of the staircase, continued by the console, refers us to Melnikov's Makhorka pavilion, and the facade on the side of the projecting cylinder to his Intourist garage. The structure's purpose as a yachtsman's house at a fashionable resort seems to contradict the collectivist spirit of the 1920s until you remember that Melnikov also designed a mansion for himself and thought seriously about how to organize relaxation in the countryside. It seems to have been the sculptural quality of the design that attracted the client, who opted for the most eccentric of the various versions put before him.

On the other hand, the elite nature of this project - and the generous budget that went with it - has allowed the use of highly qualified labour and high-quality materials, things that leading Avant-garde architects were sadly lacking. The frame of glued spruce is of fairly complex construction, especially the «drum», which bears the weight of an enormous curving panel of stained glass made using the same technology as is used in the production of glass for cars. Another structural feature is the diagonally projecting parallelepiped with glazed side-end, the purpose of which is to allow those ascending the staircase to see sky in front of them. The interior of the house uses devices typical for the fitting out of yachts. There are various niches, pull-out sections, and sliding partitions (one such partition divides the owner's study, which is situated in the cylinder, from the upper staircase landing).

House with landing stage at Zavidkin Mys', Pirogovo

9. Office building in Lithuania

Architects:Audrius and Marina Buchai

This office building is made for two companies. One of them has been designing lighting systems and selling illuminators of foreign manufacturers, the other has been designing and producing

OFFICE BUILDING, KLAIPEDA

frameless glass facades, interior and exterior details.

The building was reconstructed from a 60 m guardhouse. But, through laconic functional planning and «clean» finishing solutions a meager appearance is prevented, instead the small floor space is made to seem an integral part of the image, signifying that there is nothing unnecessary. An «intelligent house» system is installed in the building, controlling both lighting and heating. Heating devices are also significant elements of the interior: when they are needed, blue and red radiators are placed on the floor, whereas in the off-season they are decoratively placed into special niches.

The exterior aesthetics were developed on the principle of creating a contrast to the old town. The street facade and interior involve the imagery of a reflector. The exterior detailing has the form of a PAR lamp that pulsates with blue and red light. And the aluminum partition joins the floor at a curve, turning the whole inner space into a sort of allusion to a searchlight reflector.

The inner space of the building is split into zones for clients and administration. The first contains no traditional office furniture; wires for computers and metal desktops protrude from the walls. Product catalogues placed in a «transformer cabinet» keep the space looking organized. The administration zone isn't cluttered by details either; it features minimalist tables and shelves suspended in space.

10.Piano and Violin Shaped Building

Huainan, China has the buildings architecture that display the pride of high art music. Architecture building shaped piano and violin is one of the cool architectural design of existing buildings in China. The building entrance is through a great violin in which there is an escalator that lifts people into a «grand piano». Grand piano giants as its main building. Architecture building shaped piano and violin built in 2007, and serves as a showroom that shows the various plans and prospects for development as a newly developed area in Huainan City, China. Architecture building shaped piano and violin designed by Hefei University of Technology and has been built to a scale of 50:1.

Besides having architecture that displays the pride of high musical art, the unique architecture building also has become popular tourist attractions and the most romantic building in China. Tourists can admire the king and queen of musical instruments, which stand proudly in a classic contrast of black and white, rising up and praising the city in all over the world. This landmark leads you to a dizzying musical world.

Учебное издание

СОВРЕМЕННАЯ АРХИТЕКТУРА И ДИЗАЙН

Сборник текстов для практических занятий по английскому языку

Составила **Романова** Ольга Николаевна

Публикуется в авторской редакции

Подписано в свет 22.10.2012.
Уч.-изд. л. 1,9. Объем данных 9,5 Мбайт.

Федеральное государственное бюджетное
образовательное учреждение высшего профессионального образования
«Волгоградский государственный архитектурно-строительный университет»
http://www.vgasu.ru, info@vgasu.ru