

# Uniting the interior with the exterior

The **UBS Tower** in Chicago is a distinct addition to the skyline of the famous "Windy City" in the Midwest of the United States.

► At a height of 199 meters and with 50 floors over ground, the UBS Tower, often referred to as One North Wacker, is one of the most impressive architectural achievements in the city. Architect Steve Nilles of Lohan Associates, Inc. designed a state-of-the-art high-rise building that features a staggered east facade with two setbacks and a number of other elegant architectural details.

## Transparence as a philosophy

In line with UBS's corporate philosophy to strive for the greatest possible transparence, an exterior wall of anti-reflective "Amiran" glass frames the 13-meter high atrium lobby. This SCHOTT glass, which was dip-coated on both sides with ultrathin interference layers, reduces reflections by eightfold. The remaining surface reflectivity of just one percent makes the glass wall practically invisible, thus creating an inviting atmosphere. The entrance area remains light and friendly even when the sky is overcast. The idea is for the lobby to be open to the numerous pedestrians passing through the plaza in front of the Tower. The advantage is

that customers enter the building without any feeling of restraint.

## A web of cables supports the facade

Used for the first time in the U.S., the innovative construction of glass and steel enclosing the lobby is also striking. The only comparable building with this kind of a construction is the Kempinski Hotel in Munich, designed by Helmut Jahn. The glass panes – each measuring 153 by 153 centimeters and covering a total surface area of some 900 square meters – are suspended on a web of cables. Small round medallions

on the corners of the individual glass panes connect them to the pre-stressed cable system. From this central point the interior cables fan out horizontally and vertically – perfectly congruent to the glass joints that are attached by a special silicone paste.


The main idea behind this design was to create the appearance of a uniform glass facade without the interference of supporting structures. It thus gives the impression of a transparent suspended glass curtain. Architect Steve Nilles compared this kind of construction to the principle of a tennis racket. When a tennis ball hits the racket, the tightly interlaced network of strings changes shape, but then immediately springs back to its original position as defined by the frame. The stress on the glass facade,



A wall of anti-reflective glass encloses the 13-meter-high lobby.

**CHICAGO** – a city of superlatives

With a population of 2.9 million and some 30 million U.S. and foreign visitors every year, the metropolis on Lake Michigan is not only a city of superlatives because of the Sears Towers and its impressive skyline. Chicago has the highest commercial office building (Merchandise Mart), the biggest aquarium (Shedd Aquarium), the biggest public library (Harold Washington Library Center), the largest museum of modern art (Museum of Contemporary Art) and the longest street (Western Avenue). The most important city in the Midwest of the United States is also known for the production of the first pair of roller skates in 1884, the first zipper in 1896, the first envelope with a window in 1902 and the first daily TV soap opera in 1949 (for more details, visit: <http://egov.cityofchicago.org>).



The round metal medallions attached to the corners of the glass panes are the joints for the network of steel cables and also stabilize the glass facade.



Skyscrapers/Daniel Kieckhefer

Skyscrapers/Daniel Kieckhefer

caused for example by wind pressure, is distributed evenly throughout the network of internal cables.

### **Birthplace of skyscrapers**

The high-rise office building at One North Wacker is in The Loop district of downtown Chicago, the location of banks and court buildings from many different epochs. Chicago is, in fact, the birthplace of skyscrapers and also the home of the highest skyscraper in the U.S., the 442-meter Sears Tower, which opened in 1974. The oldest still existing high-rise is "The Rookery," which was designed by the renowned architect Frank Lloyd Wright and built in 1880. Taken together, all these buildings form the famous Chicago skyline. ◀

The office tower of the Union Bank of Switzerland, known as One North Wacker, rises 50 floors into the skyline of Chicago.