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unibat of America, Inc.

SPACE FRAME SYSTEMS

BALTIMORE WASHINGTON INTERNATIONAL AIRPORT-TERMINAL

SPHEROBAT • UNIBAT

SPHEROBAT

SPHEROBAT, the latest of Stephane Du Chateau's space frame systems constitutes a major breakthrough in space frame technology.

While space frames have been available for almost 35 years, their implementation has been hampered by the high cost of field welding and the need for complex stress calculations.

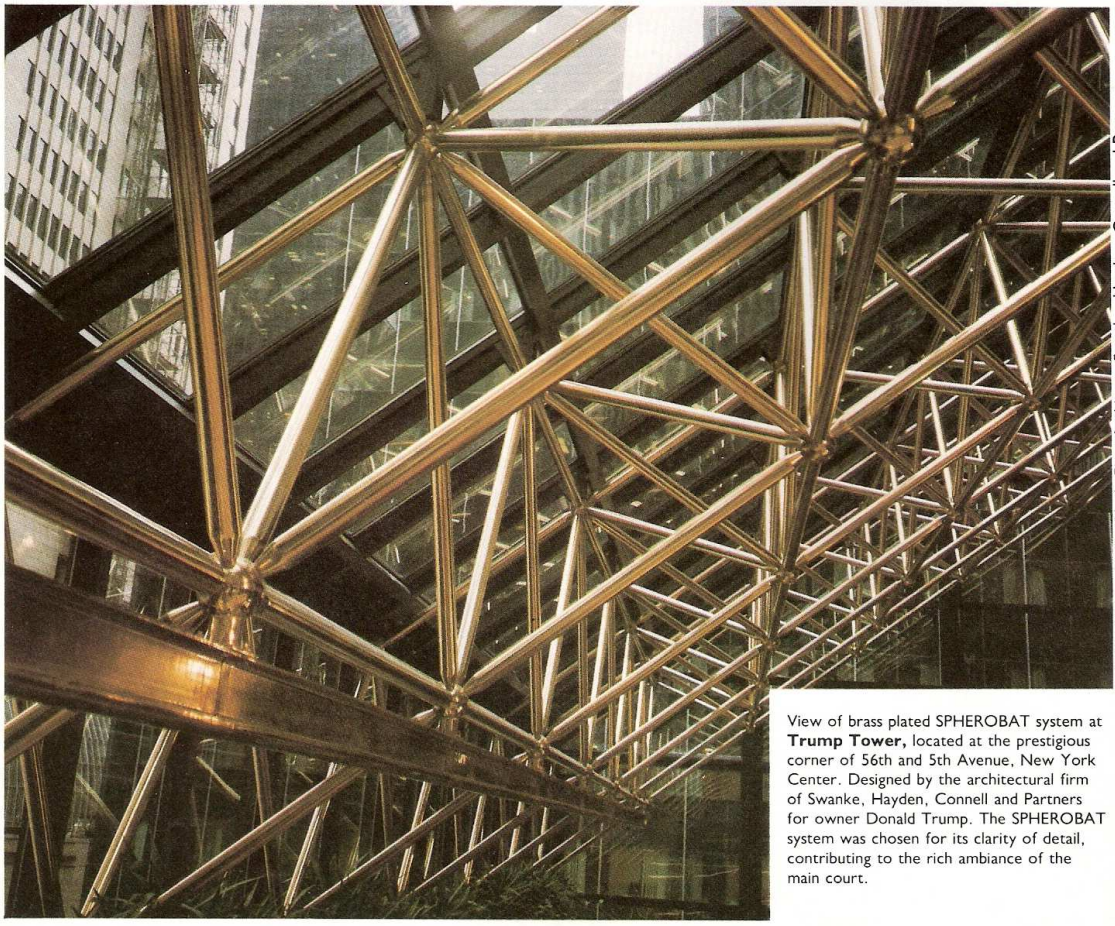
The SPHEROBAT system now makes it possible to produce outstanding space frame structures at a reasonable cost. SPHEROBAT can save on structural steel and allow large clear spans with a minimum of columns.

SPHEROBAT, differing from UNIBAT, is shipped unassembled to the site. The building module is then assembled on the ground in large sections and then hoisted into place.

SPHEROBAT is a space frame system solely based on two main components. First, a hollow spherical forged steel node with a detachable cap that is secured to the main part of the node with a through bolt. Second, round connecting tubes that can be tapered to meet the design requirements of each project. The tubes' ends are drilled and threaded to allow for concealed bolted connections.

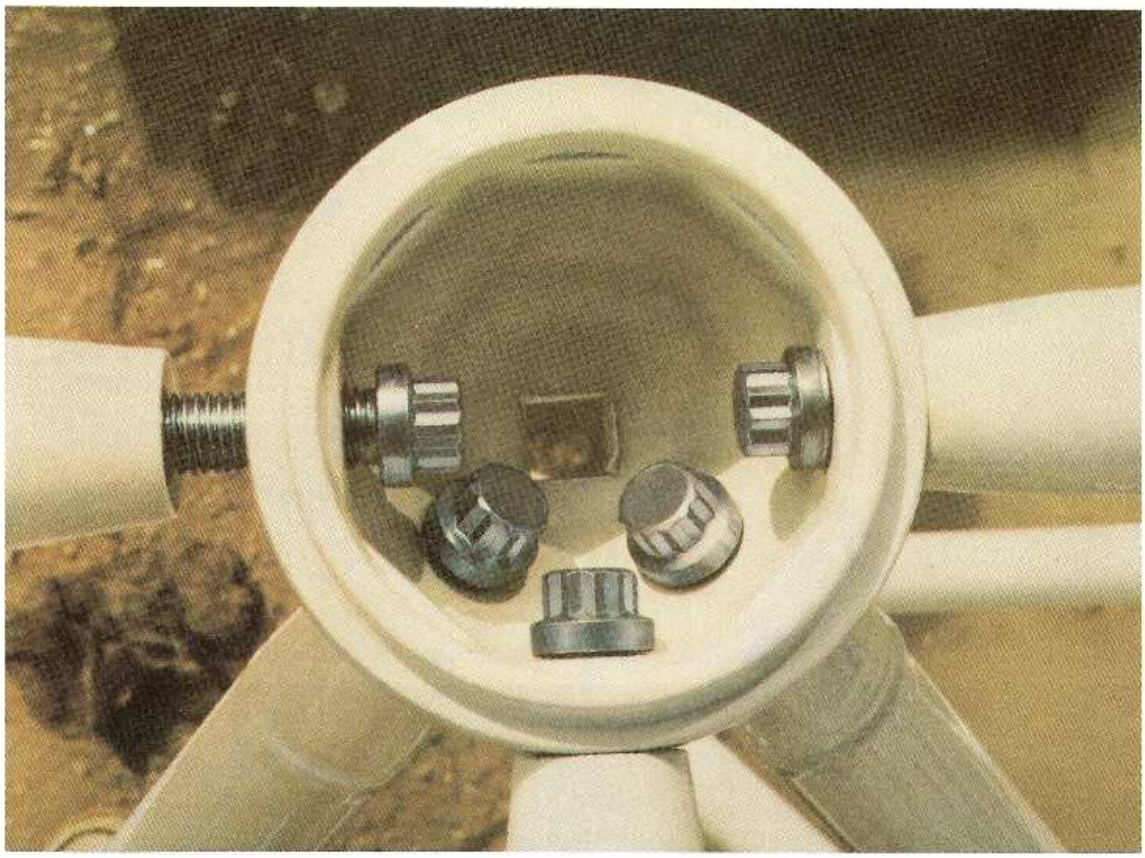
By fully addressing the freedom of conception and the liberty of expression required by this new design age, the SPHEROBAT system provides operational means of realizing the most diversified and advanced creative projects.

The spherical shape of the node provides for greater ease of horizontal, as well as, bi-directional connections. This ability translates into structural freedom that encourages and supports the production of variable geometrics.

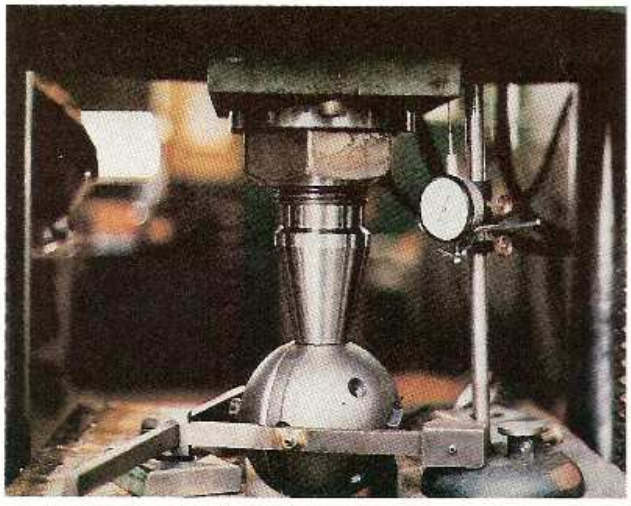


TRUMP TOWER New York City, Architect: Swanke, Hayden, Connell and Partners

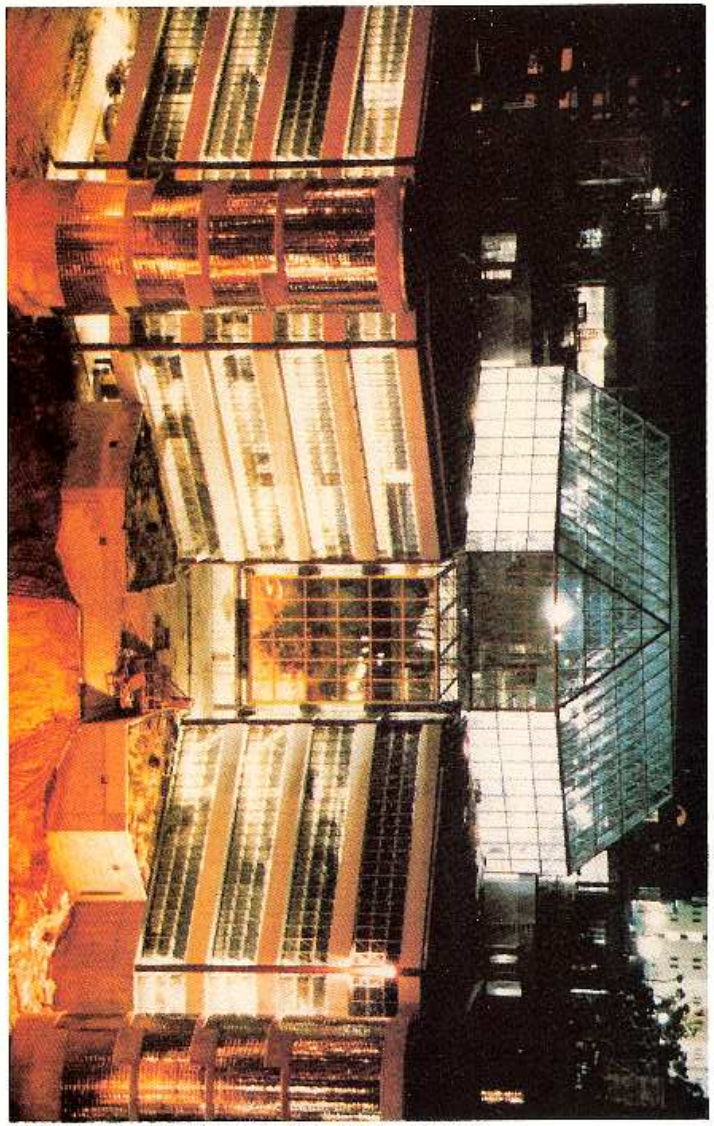
View of brass plated SPHEROBAT system at **Trump Tower,** located at the prestigious corner of 56th and 5th Avenue, New York Center. Designed by the architectural firm of Swanke, Hayden, Connell and Partners for owner Donald Trump. The SPHEROBAT system was chosen for its clarity of detail, contributing to the rich ambiance of the main court.



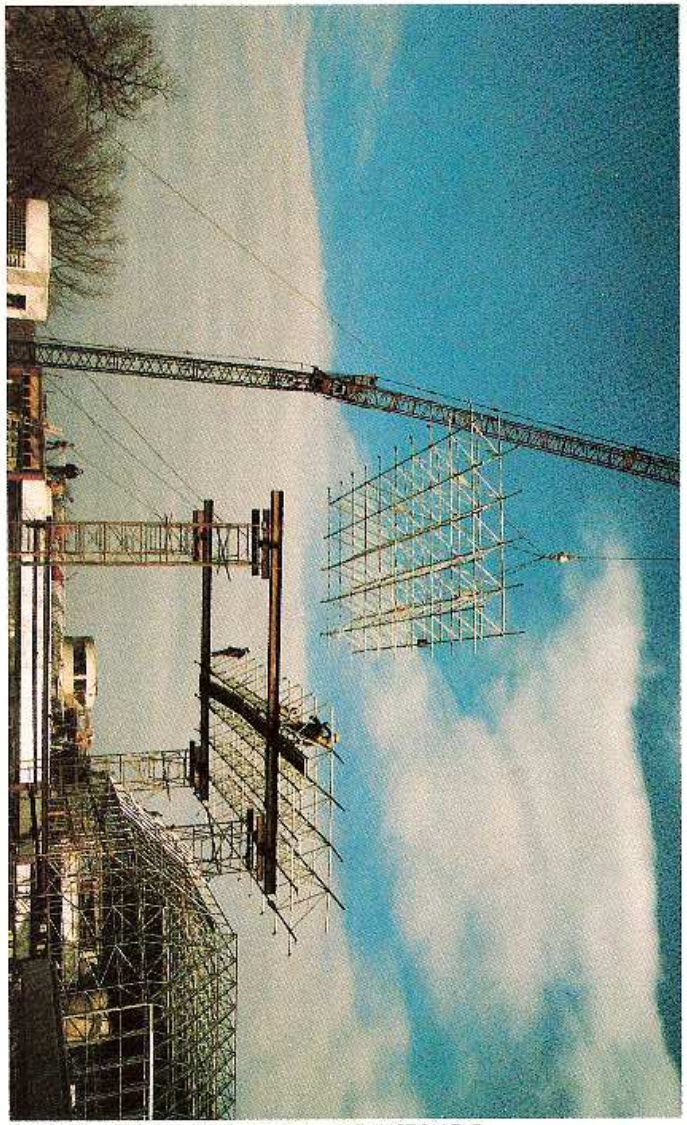
The above photo shows the interior bolting system of **SPHEROBAT** nodes



The photo at the left shows actual laboratory testing of the completed forged node.



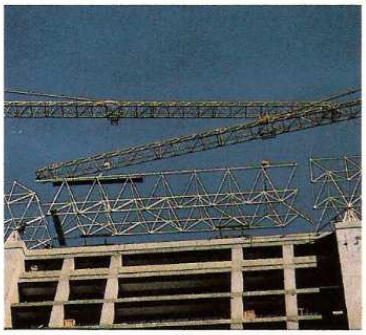
INTELSAT HEADQUARTERS BUILDING, WASHINGTON D.C.
Architect: John Andrews, Incl. PTY. LTD.



INTELSAT HEADQUARTERS BUILDING, WASHINGTON D.C.
Erected by R.E. Linder Steel Erection Company, Inc.

GRAND CYPRESS HYATT, DISNEY WORLD, FLA.
Erected by R.E. Linder Steel Erection Company, Inc.
Architect: Harwood K. Smith and Partners, Inc.


(1)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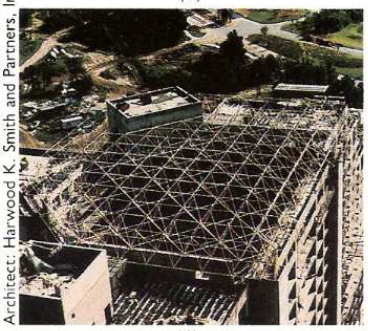
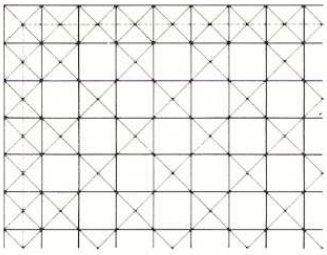

(4)

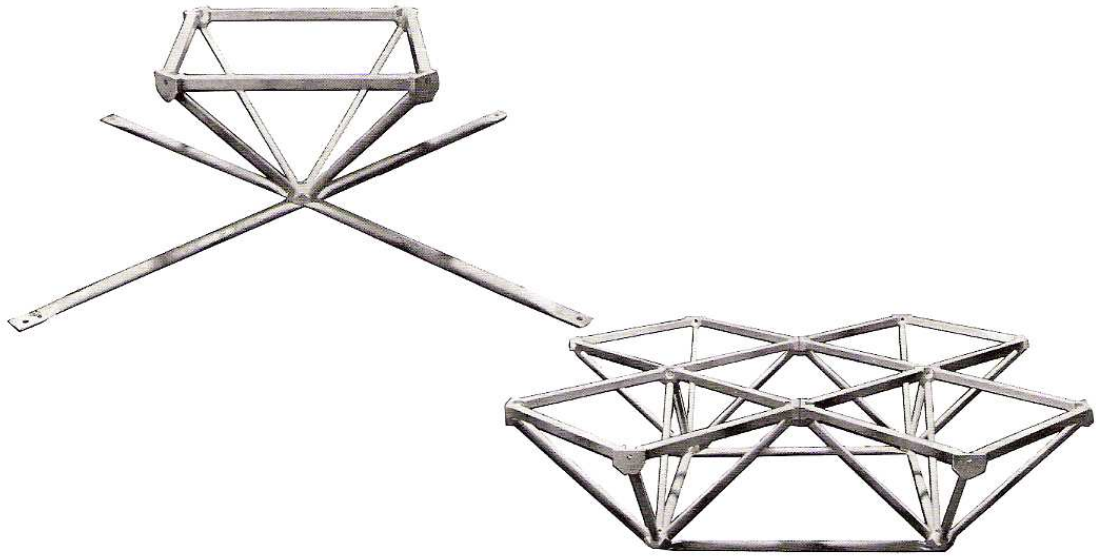

(5)

1) Hoisting Preassembled Unit
2) Positioning Before Tie-In
3) Final Tie-In
4) Completed Space Frame
5) Final Product

TOWSON STATE UNIVERSITY DINING HALL, TOWSON, MARYLAND
Architect: Meyers and D'Aleo



UNIBAT



History

The UNIBAT System was developed by Stephane Du Chateau. The system arose out of a need to create free, unobstructed space for the larger buildings being created today.

The UNIBAT System is the result of research aimed at the organization of space in the most economical way and with the use of the most appropriate materials.

The system embodies at one and the same time new construction methods and advanced technology.

UNIBAT pyramids are of steel sections and are produced industrially. They are light, stacked for ease in transport, storage and assembly. UNIBAT pyramids are site assembled and the rigidity of the structure, which reduces the supports to a minimum, allows assembly at ground level and final positioning by simple hoisting.

Basic Building Module

The **basic building module** for the UNIBAT System is a **shop-assembled** inverted pyramid. The corners of the pyramid bases are bolted together in the field.

The base of the pyramids are usually square in shape, although other shapes are possible. The apex and corners of the pyramids may be forgings, to which the top chord and web members are welded. To suit the appearance desired and to get the most economical arrangement, the chord and web members can be of any structural shape such as round or square tubes, angles, etc

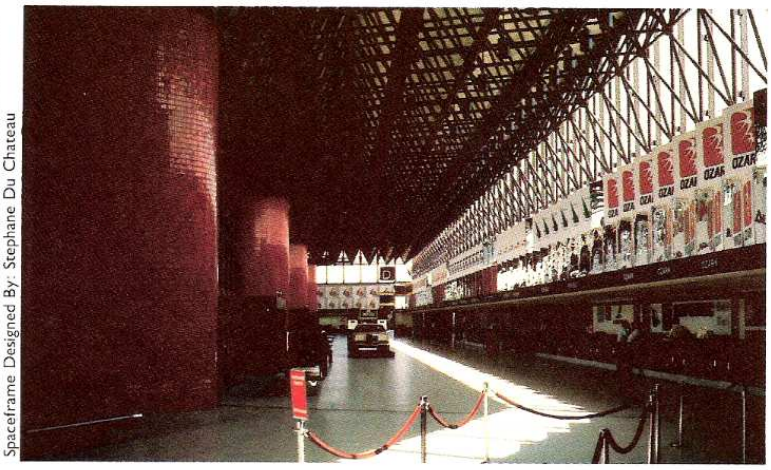
The corners of the bases of the inverted pyramids are bolted together in the field. The apexes of the pyramids are connected together to form a two-way rectangular lower grid giving the appearance of a chess board, where every other square is filled with a pyramid. The top chord grid forms a 45° angle with the building line and the bottom chord grid.

Freedom of Design

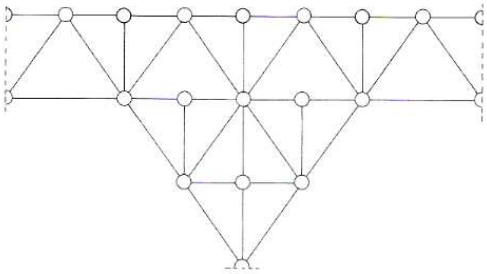
UNIBAT does not rely on any one specific connector. The frame itself utilizes either hollow or rolled members, or a combination of the two in the same structure. The elements are partially preassembled in the shop and bolted together in the field, saving on overall labor costs.

UNIBAT'S great strength and relatively low cost make its use adaptable to a wide variety of structures. The primary uses of UNIBAT include convention halls, civic arenas, sport centers, and other public meeting places requiring large roof spans with a minimum of cost.

BALTIMORE WASHINGTON INTERNATIONAL AIRPORT
Spaceframe Designed By: Stephane Du Chateau

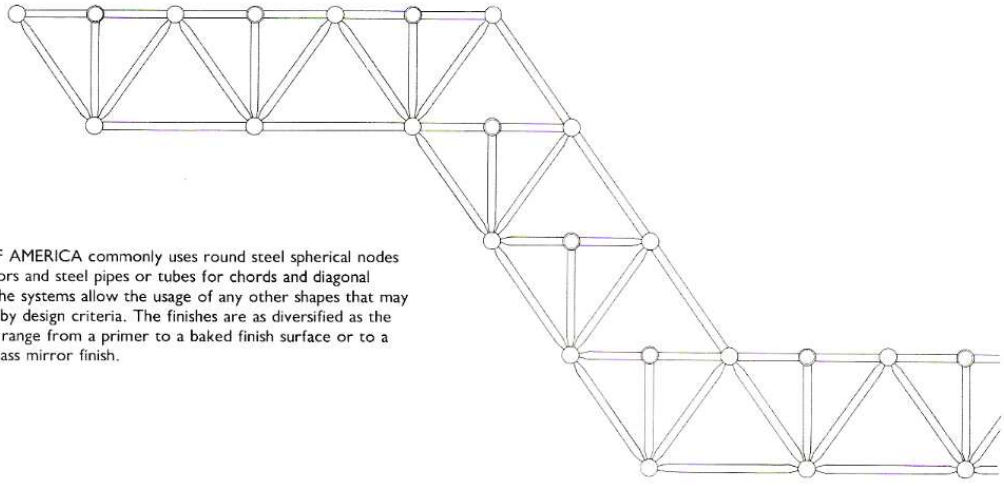


110,000 square feet, with 110' spans along the center spline; cantilevered 55'-0" to each side of the supports.



Typical Column Capital

The affiliation of UNIBAT OF AMERICA, INC. with R.E. Linder Steel Erection Co., Inc., enables us to plan the erection of unusual space frames during the architect's feasibility phase of study. Once the bid documents have been finalized, UNIBAT OF AMERICA, INC. continues to aid the contractor in the planning stages of erection.



Typical Sloping Wall

UNIBAT OF AMERICA commonly uses round steel spherical nodes for connectors and steel pipes or tubes for chords and diagonal members. The systems allow the usage of any other shapes that may be required by design criteria. The finishes are as diversified as the systems and range from a primer to a baked finish surface or to a high gloss brass mirror finish.

GRAND CYPRESS HYATT, DISNEY WORLD, FLORIDA

unibat of America, Inc.

SPACE FRAME SYSTEMS

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