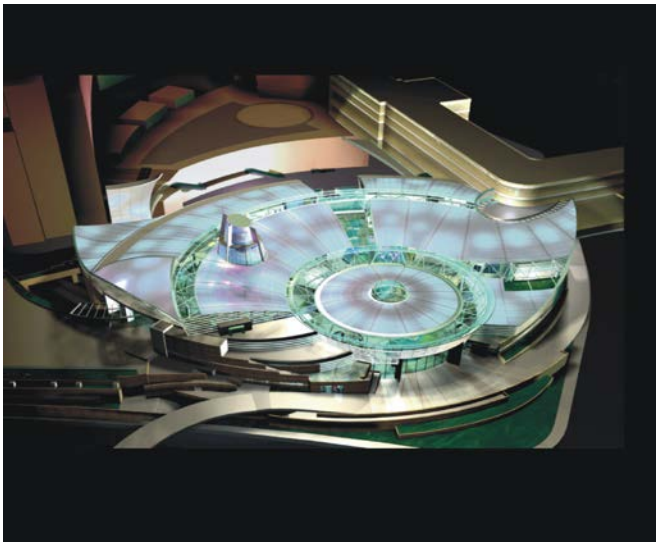
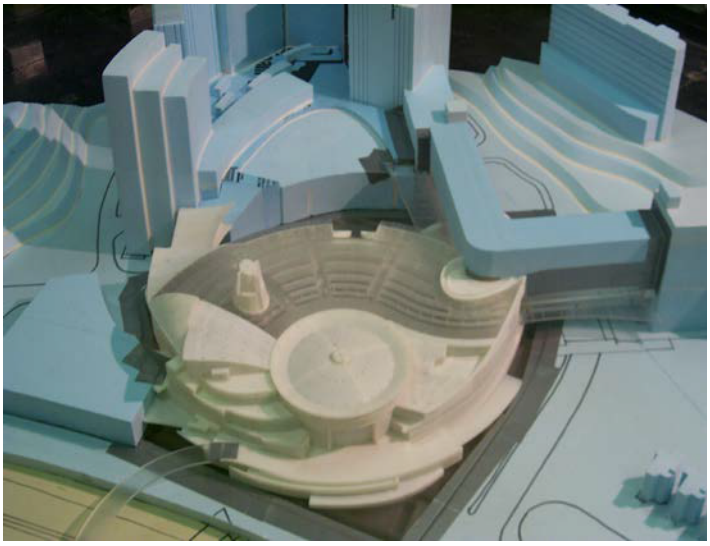
Cyberport Cybercenter, Hong Kong

Wind Engineering Study





Owner	Structural Engineer	Architect
Cyber-Port Management Ltd.	Maunsell Structural Consultants	The Jerde Partnership
Height	**Year Tested**	**Model Scale**
50m	2000	1:200 Pressure Model

The Project

The Cyberport Cybercenter is part of a high tech development with office and residential components. The Cybercenter is the entertainment centre of the development.

It has a dome-shaped roof in the middle and extended curvilinear roof sections supported by a space frame. All roof areas are clad with fabric panels. The perimeter consists of glass walls.

The Wind Tunnel Studies

Studies were carried out to examine wind-induced local cladding pressures, area loads on the fabric panels and the structural frame loads.

The project is exposed to open water to the southwest but backed to hilly terrain to the east.

Local pressures were measured at more than 700 pressure tap locations using a solid state scanning system which allows pressures at all tap locations to be measured simultaneously.

The pressure data were integrated over the panel areas to provide area loads on the fabric panels.

The pressure data were also integrated over the main structural frame to provide load effects using the influence functions provided by the Engineer.

Equivalent static loads were provided for the design of the main structural elements of the roof.

The design of the Cyberport Cybercenter Roof is the recipient of the Hong Kong Institute of Engineers Joint Structural Division Special Award 2003 – Special Award.

The Boundary Layer Wind Tunnel Laboratory

Western

The Boundary Layer Wind Tunnel Laboratory
The University of Western Ontario
Faculty of Engineering, London, Ontario
Canada, N6A 5B9 Tel: (519) 661-3338 Fax: (519) 661-3339
Internet: www.blwtl.uwo.ca E-mail: info@blwtl.uwo.ca

FSTB/ 212 /October 2003/EH
Last Printed: September 30, 2008