## C435018: MAJOR ARCHITECTURE

KEY WORD: IMPACTS / TRANSPARENT WALLING / TRANSPARENT/OPAQUE WALLING

APIRADEE THONGUTHAI: THE IMPACTS OF EXTERIOR WALL DESIGN ON USERS:

A CASE STUDY OF THAI AIRWAYS INTERNATIONAL BUILDING. THESIS ADVISOR
: PROF. VIMOLSIDDHI HORAYANGKURA.Ph.D. 158 pp. ISBN 974-582-904-8

The purpose of this study was to ascertain the opinions of office workers who work in office areas with different exterior wall. Comparisons were made in 5 areas: (1) Visibility (2) Annoyance from glare (3) Thermal comfort (4) Spaciousness (5) Sense of safety deriving from wall design.

In this case study, Thai Airways International's Building was selected for investigation as the building's exterior wall is designed in both transparent walling (height of glass being 2.80 metres from floor to ceiling) and transparent/opaque walling (height of glass being 2.00 metres from ceiling downwards).

The result of this study reveals that the psychological impacts is more important for those who work in areas of transparent wall design; factors such as visibility, spaciousness and feelings of security are important. However, those who work in areas with transparent/opaque walling are more affected by the physical factors of annoyance from glare and considerations of thermal comfort. In a comparison between the two wall designs, research shows that users prefer working in areas of transparent walling to areas with transparent/opaque walling, because the transparent wall provides higher visibility and better feelings of spaciousness, although it makes workers feel less safe than in the case of the transparent/opaque design. Generally. it can be concluded that the transparent wall has the highest psychological effect when the users sit near the glass. The difference in size of transparent surface has clearly different effects (the opionions of users who work in areas of transparent walling and those who work in areas without such walling are totally different). Furthermore, in the users'responses to utilizing the office space other than working, the design of the exterior wall becomes less important.

The result of this study shows that the environment has a real effect in terms of psychological impact on the opinion of the workers. Different exterior wall design will bring about different effects. This should be taken into accout in exterior designs which determine differing sizes of transparent surface and subsequently affect the opinion of the users.