

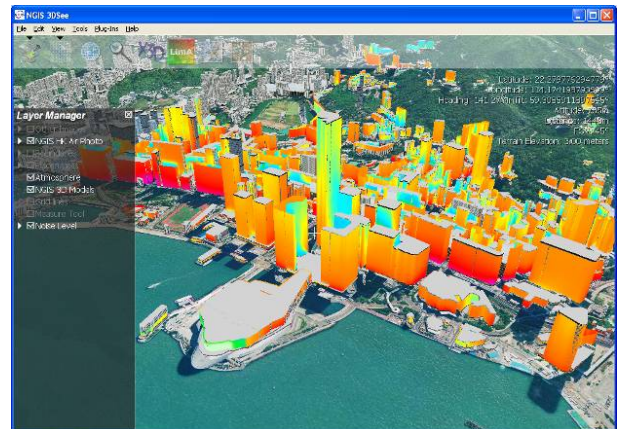
Technology Driven Solutions for the Quantification of Urban Road Noise

Road noise is widespread in urban and suburban Asian areas and commonly the dominant source of ambient noise during the day time hours and well into the night-time. Prolonged excessive exposure to road noise can cause adverse effects on health and well being through sleep disturbance and stress. The challenge to government agencies throughout the region to predict and quantify noise exposure to populations has led to a number of noise prediction and mapping initiatives. These typically aim to express noise exposure problems in terms that can be compared with existing and emerging guidelines that seek to address acute and adverse noise related social impacts. Understanding the potential problems facilitates informed decision making for the development and promotion of strategies to reduce community noise and promote sustainable urban living. This is highly pertinent to the Asian nations whom promote the successive regeneration of the urban environment and, as economies prosper, development of sustainable new towns to accommodate population growth.

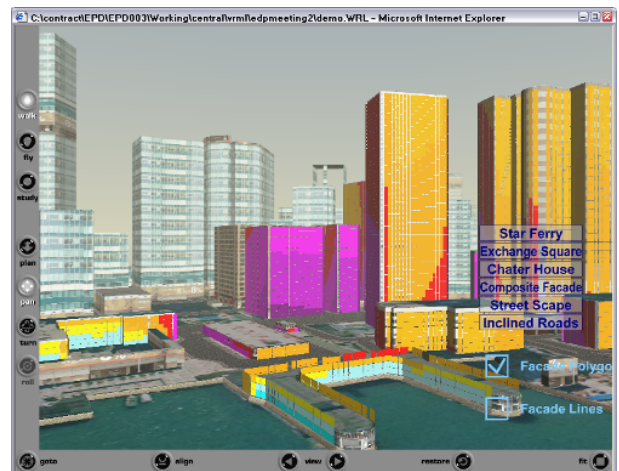
Computerised noise exposure prediction technology is now widely accepted as an effective way to help quantify noise exposure to support decision making on transport policy, development density and at-source noise control measures. Most European Union member states, Canada, the USA, developed Asian nations and Australia already have programs in place for the stepwise process of reducing noise exposure in large cities and suburban areas. Recent improvement to integrated software technologies has allowed organisations to promote the wider use of noise mapping tools by general practitioners and specialists. The new technology offers enhanced interaction and a window of transparency to a highly technical process which promotes

stakeholder participation in environmental matters.

This article discusses recent progress made in the mapping of urban noise, the types of technologies now being employed at the cutting edge of the environment profession and suggests methods of ground-truthing of technical models for greater public confidence.



Three-dimensional Noise Mapping of Hong Kong



Hong Kong Façade Noise Levels in VRML

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