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Acoustic Design of the National Grand Theatre of China

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When designing a new opera or concert hall, the architectural requirements for excellence are most of the times conflicting with the similar acoustic requirements for excellence. Good compromises have to be sought; with the well known difficulty that seeing mostly predominates over hearing.

The National Grand Theatre of China, Beijing, under construction is composed of three large performing halls: the Opera (2400 seats), the Concert Hall (2000 seats), the Theatre (1500 seats). During the design of the Opera, the architect became unhappy with the layout proposed for the international competition providing optimal first lateral reflections to the public. Series of curved walls were desired by the architect from architectural points of view that create a lot of acoustic shortcomings. Decision has been made to dissociate the visible walls made acoustically transparent from the acoustic ones. The acoustic design of the opera, including computer modelling is presented.

The complete document was not available at the publication time. It has been replaced by the submitted abstract.