

Arup

Arup (www.arup.com) is a multi-disciplinary engineering consultancy with offices throughout the world.

The Challenge

Located about 21 km to the north of the city of Chongqing, Jiangbei Airport is one of the ten largest domestic trunk airports in China. It is currently operating 56 scheduled flight routes and is the base site for China Southwest Airlines and Sichuan Airlines. The existing installations are handling between 2.5 and 3 million passengers a year. By the year 2010 traffic through the airport is expected to have grown to an annual seven million passengers requiring an enlarged terminal building.

The new terminal has to meet the requirement for a Landmark of Entry for Chongqing, designed to create a lasting first impression on new arrivals, and will be approximately 66,000 m², with a 10,000m² basement for parking and plant rooms. One of Arup's tasks was to design the parking.



The Solution

The Transport Planning team based in Manchester played a major role in the development of the design. As a result of future requirements it was necessary to set in place all the relevant design standards. The nature of the site was such that car parking could not be separated from the terminal building and so the team went about designing a suitable car park layout to include access and egress ramps to and from the terminal building. Through close contact with the Chinese Authorities Arup's engineers were able to determine what vehicles were likely to use the airport as well as access it for delivery purposes.

AutoTrack was selected to model critical vehicle movements and this enabled engineers to achieve a workable design. The wide range of vehicles in the European vehicle library enabled designs to be carried out for most scenarios. Design standards in China can differ quite considerably from the UK. However, vehicles are built to almost identical design specifications in terms of overall dimension and the Auto Track software comfortably allows for changes in vehicle type. The animation tool in the software allowed Arup's engineers to show the vehicle manoeuvring on screen as it created its path and this impressed the architects and local authorities alike.

"It wasn't just a sketched image; we were able to provide physical examples of how we came to certain conclusions and the reasons behind them."

Michael Fyles

Why Arup use AutoTrack:

- For the AutoDrive and Animation tools
- Very easy to use and requires no learning curve
- Excellent value for money

Autodesk
Preferred Industry Partner
AutoCAD® Civil 3D®



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