

# Network Basics of Indoor Navigation for Smart Evacuation

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## SUMMARY

The number of buildings, which are very tall, complex and located on wider areas, has been increasing in today's modern cities. Having dozens of floors, hundreds of corridors, and rooms, and passages, these buildings are almost like a city in terms of their complexity and number of people accommodated. Due to size and complexity of buildings, there are many new problems to be addressed. Evacuation of the buildings quickly and seamlessly is the leading problem in case of emergency. Fire, power outage, terrorism (explosions, bomb threat, hostage-taking incidents), chemical spills, earthquake, flood, etc., are some of the extraordinary occasions that may be encountered or affect indoors. In such kind of cases, formation of panic, crowd, congestion, crush, unable to reach exit, etc. are frequently encountered.

In this talk, Data Generation Process of 3D Network Analyses and Human Navigation System for indoor will be presented. In this process, it is used to extract the geometrical and 3D topological vector data automatically from architectural raster floor plans.