## BomberMan

## Introduction:

This is a simple 3d BomberMan game based on Ogre and CeGui. People can plays with almost three enemies. User can control his character by using arrow keys and set bomb by space key. There are two types of obstruction: the destructible brick and wood, the indestructible wall. There are three types of bonus: speed-up, bomb-power-up and bomb-number-up, which will be generated randomly by destroying the obstruction.

## Implementation:

The BtooomApplication.h, which is a subclass of ExampleApplication.h, is used to implement the overall system framework. It initializes the environment that is required for running this game and sets up a framelistener to track on user's operation. The BtooomManager.h is in charge of controlling game play and do management on every scene node (character, enemy, wall, etc.).

In this game, enemy is driven by a best route finding algorithm. 2d matrix \_mValueInterest[][] and \_mValueDanger[][] are kept to record the interesting value and the dangerous value for every point. Once a destination with high interesting value is decided, we use a Dijkstra algorithm to find the shorted path from current position to destination and store it in the stack \_mFootWay. Enemy will check the whether the next position is safe or not before he moves. If the next position is not safe, the enemy will wait for a while or find a temporary place for shelter.

