**Blog 2**

Many techniques commonly used in games industry found their way in real life by the implementation of diverse medicine, computer science, robotic and even safety projects, not only increasing the game performance, but also having a strong impact on human life. One of the examples may be the pathfinding algorithms, harnessed to work with almost every kind of a map (provided that the input types is correct) – from their artificial visualisations for the game needs to genuine high-scale maps based on the satellite pictures. Regarding the case of Google Maps web application, its complex algorithm designed to find the shortest route is based on Dijkstra’s Algorithm, designed in 1956 by a programming pioneer Edsger W.Dijkstra. The execution of DA begins with defining a set of nodes and storing the distance between each of them in a table. Next, the system creates the priority queue (abstract data type used to represent the collection of the elements with key assigned to them) for all the vertices with the priority being current distance calculated from the source vertex. Until the queue is empty, the lowest priority vertex is being removed from the queue, as well as the newly calculated tentative distance is being compared to the current assign value and reassigned if necessary.

The success of Dijkstra’s Algorithm revolutionised the navigation world. Though DA would probably turn out to be inefficient in case of such complex application as Google Maps, it gave a base for much more advance methods of finding the shortest routes with the use of intersections and similar key point on a route as nodes.