**Blog 5**

Any person, that seriously considers a career in a technology industry should acquire at least basic knowledge about Fuzzy Logic. As an extension of the binary logic, it allows to model logical reasoning with imprecise or vague statements, which interpretation may vary depending on the receiver (audience). Fuzzy logic returns the values between 0 and 1, where the numbers represent two completely different states or physical phenomenon. FL can be useful in many aspects, e.g. NPC decision making (such as weapon selection), enabling AI opponent to access the threats and classification (player’s ranking).

As many other AI techniques, FL has been tested in different kinds of games pursuing to simple design combined with intelligent agents. Regarding its simplicity, related with language-like nature resulting in concise and efficient design methodology, FL perfectly fits to the requirements. Officially introduced to the game development world in 1996, Fuzzy Logic was listed as one of the most useful techniques for game AI design. One of the advantages of using Fuzzy Systems is that they do not require big amounts of data to train the model. Moreover, they are interoperable, as well as relatively simple to implement and model the reasoning. Contrary to most AI techniques, FL has also the ability to deal with nonlinearity and lack of accuracy in provided information set. Traditional decision making may result in unnatural sudden switches from one state or decision to another, but thanks to Fuzzy Logic some changes may be achieved gradually. Regarding low resources available to the game developers, as well as real-time constraints they often have to abide to, Fuzzy Systems seems to be one of the most valuable techniques in the gaming industry.