Software Design Document

Pandemic

Version: 0.1

Scenario: 2099

After increasing economically problems of the United States of America, in 2033 the president of the United States of America announced the third world war. His policy was to make America Great Again and to become the leading nation. He cancelled atom peace treaties with Russia and wars between the USA and Russia have created huge devastations on the planet. As the president dismissed all of his scientific staff a long time ago, the only place for the scientists was to go to Europa or Japan, since in China a communist party was neglecting the outcomes of modern science as well.

While the three main powers of China, Russia and USA have led a long and intensive trade war that preceeded the third world war, it was no longer possible for the three nations to directly negotiate with each other. Unfortunately they dependend on goods that were procudes and delivered only by their enemies. The European Union therefore managed to position themselves basically as neutral under the highly skilled scientific and diplomatic chancellor. They enabled the three warfaring countries to still trade goods with each other by channeling the trade routes through the neutral European Union.

As USA, China and Russia had long left the United Nations, the United Nations have been mainly taken under control by Europe and by Japan. Under the consequence that most scientists have left the USA, China and Russia, a new kind of parties started to evolve in Europe and Japan. Those were scientific oriented parties that directly emerged from the ecological parties. Thus it can be explained that also the United Nations became a highly scientific oriented community, where it first time in the history of mankind it was possible to bring together states like France, Germany, Spain, Japan etc. under a common scientific and democratic government.

Due to their expansional behaviour, the war leading parties clashed mainly in the african region, this time leading to a nearly complete genocide of the african population, which had been abused in the past already. While these war led to huge devestations in Africa, not so much devastation was created in America, China or in Russia. However, because the key driver of this war, was to supress the poor population with the terror of war by the rich population, a lot of people were executed in these countries, sent to war and the population was otherwise decimated.

At the end of the war, Africa was basically completly devasted. In the countries China, America and Russia, there were little destructions, but there was such a high death toll, that complete cities became to „ghost towns“, while the rich people had bought islands like Cuba for their well-beeing.

Beneath all this scenario, serious scientific threats emerged for the world. As the global climate change progressed, whole towns like New York City were flooded. Also Space Debris became to a problem, that it was no longer possible to launch satellites. Also the volcane under the Yellowstone National Park became near to errupt and to destroy the whole humanity. The jetstreams came to an end. Large masses of ice were melted at the poles. Due to the climate change, diseases were spreading faster then ever. The oil resources were nearly depleted by the third golbal war.

To sum it up, for the first time in the history of mankind, after the end of the third global war, all efforts were concentrated in the United Nations under leadership of the European region, to bring

solutions to these threats the planet was facing by an elite scientific community which was financed by the most wealthy people of China, USA, and Russia such that they could continue their wealthy lifes. This enabled the scientific community to establish the most sophisticated techniques and technologies that have ever been seen on the planet.

Software Architecture

Since this is a game that includes a lot of different aspects, it is written in a distributed manner. The aim is to act as a technology demonstration project for Erlang. Therefore each Town in the world will be represented by a separate process, also each player, each country, each Hospital, each Car, each Ship, each Plane, each whatsoever will be represented by a process.

Additionally there are other processes, that are needed to manage the world. There is a authentification process as well as a world map process.

For the time beeing, we have the following architecture: