

A Perspective of Digital Formation in the Solar Community as a Prototype for Finding Sustainable Algorithmic Conditions on Earth

Authors : Kuniyisa Kakumoto

Abstract : "Purpose": Global environmental issues are now being raised in a global dimension. By predicting sprawl phenomena beyond the limits of nature with algorithms, we can expect to protect our social life within the limits of nature. It turns out that the sustainable state of the planet now consists in maintaining a balance between the capabilities of nature and the possibilities of our social life. The amount of water on earth is finite. Sustainability is therefore highly dependent on water capacity. A certain amount of water is stored in the forest by planting and green space, and the amount of water can be considered in relation to the green space. CO₂ is also absorbed by green plants. "Possible measurements and methods": The concept of the solar community has been introduced in technical papers on the occasion of many international conferences. The solar community concept is based on data collected from one solar model house. This algorithmic study simulates the amount of water stored by lush green vegetation. In addition, we calculated and compared the amount of CO₂ emissions from the Taiyo Community and the amount of CO₂ reduction from greening. Based on the trial calculation results of these solar communities, we are simulating the sustainable state of the earth as an algorithm trial calculation result. We believe that we should also consider the composition of this solar community group using digital technology as control technology. "Conclusion": We consider the solar community as a prototype for finding sustainable conditions for the planet. The role of water is very important as the supply capacity of water is limited. However, the circulation of social life is not constructed according to the mechanism of nature. This simulation trial calculation is explained using the total water supply volume as an example. According to this process, algorithmic calculations consider the total capacity of the water supply and the population and habitable numbers of the area. Green vegetated land is very important to keep enough water. Green vegetation is also very important to maintain CO₂ balance. A simulation trial calculation is possible from the relationship between the CO₂ emissions of the solar community and the amount of CO₂ reduction due to greening. In order to find this total balance and sustainable conditions, the algorithmic simulation calculation takes into account lush vegetation and total water supply. Research to find sustainable conditions is done by simulating an algorithmic model of the solar community as a prototype. In this one prototype example, it's balanced. The activities of our social life must take place within the permissive limits of natural mechanisms. Of course, we aim for a more ideal balance by utilizing auxiliary digital control technology such as AI.

Keywords : solar community, sustainability, prototype, algorithmic simulation

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