受験番号：30IPE004

[Claim 1]

An artificial satellite characterized by comprising:

a Doppler compensation circuit including

a Doppler estimation unit configured to acquire a received power level of a received wave and a time fluctuation of the received power level, to derive a Doppler frequency of the artificial satellite based on the received power level of the received wave and the time fluctuation of the received power level, and to output the Doppler frequency as an estimated Doppler frequency, and

a multiplication unit configured to multiply a signal of the estimated Doppler frequency by a signal of a local frequency for demodulation, thus shifting the local frequency by the estimated Doppler frequency.

[Claim 2]

The artificial satellite according to claim 1, wherein

the Doppler estimation unit

acquires the received power level of the received wave and the time fluctuation of the received power level,

uses, as a fixed parameter, a speed of light, a position of a transmitting station, a carrier wavelength λ, a transmission equivalent isotropic radiant power, and a receiving antenna gain Gr,

calculates the Doppler frequency of the artificial satellite based on the received power level of the received wave and the time fluctuation of the received power level, and

outputs the Doppler frequency to the multiplication unit as the estimated Doppler frequency.

[Claim 3]

The artificial satellite according to claim 1, characterized in that

the Doppler estimation unit,

acquires the received power level of the received wave and the time fluctuation of the received power level,

refers to reference information including candidates for the estimated Doppler frequency prepared in advance in association with the received power level,

calculates the candidates for the estimated Doppler frequency based on the acquired received power level of the received wave,

selects the estimated Doppler frequency from the candidates based on the time fluctuation of the received power level, and

outputs the estimated Doppler frequency to the multiplication unit.

（コメント）出願形式が不明でしたので、「～することを特徴とする」という表現は、原文通りに訳出いたしました。請求項２ではこの表現はございませんでしたので、wherein を用いております。

In recent years, a fuel cell device has been proposed as next-generation energy, the fuel cell device including a fuel cell unit that can obtain power using a fuel gas (hydrogen-containing gas) and an oxygen-containing gas (air).

A power conditioner is used in a power generation system in order for a fuel cell device that is a distributed power source to supply power to a load in coordination with a system power source. The power conditioner has various functions such as an inverter function for converting a direct current output from the fuel cell device into an alternating current and a control function for performing interconnection control with a system power source.

The power conditioner supplies the power generated by the fuel cell device to an external load in coordination with the system power source. At this time, the output power is increased or decreased so as not to generate a reverse power flow to the system, and thus power satisfying the power requirements of the external load is output. When the output power from the power conditioner to the external load is increased, the output current from the fuel cell device to the power conditioner is decreased. When the fuel cell device detects a decrease in the output current, the fuel cell device attempts to increase amounts of oxygen gas and fuel gas supplied to the fuel cell unit by controlling the operation of an auxiliary device in order to increase an amount of power generation. However, it is difficult to instantaneously increase the amounts of oxygen gas and fuel gas, and in the fuel cell device, a state in which oxygen gas and fuel gas for power generation are insufficient occurs. Power generation in a state where the oxygen gas and the fuel gas are insufficient causes damage to the fuel cell unit, resulting in problems that the fuel cell device may be easily damaged and the service life may be short.

The business operation image process view BV, which will be described later in detail, illustrates an overview of business operations to be systematized abstracted by "events", "cores" and figures showing their relationships, and shows the entire business operations of a company in a macro manner and in a form that can be understood by multiple persons. The pre-processing engine 100 has a role of clearly identifying the business operation and an operation target during a core business operation, and

describing the identified business operation and operation target in the form of a business operation image process view when a core business operation application is constructed.

The SVO list E1 is a list that displays operations that the roles on a scenario chart perform on the operation target. The SVO list E1 a list with the same granularity as that of the roles on the scenario chart D4, in other words, a list that expands, as a granularity, the "function" when the role on the scenario chart D4 is systematized.

Further, the activity definition E2 is a definition related to a process (step) for completing the role on the scenario chart D4.