Non-Patent Literature 1: GlobalPlatform Card-Card Specification v2.2-Amendment C: Contactless Services v1.1

Summary of Invention

Technical Problem

[0005]

Apparatuses (or systems; hereinafter referred to as "information processing systems" in some cases) capable of performing contactless communication with external apparatuses such as readers/writers include, for example, communication control apparatuses such as antennas or contactless frontends (CLFs) or information processing apparatuses such as subscriber identify modules (SIMs) or universal integrated circuit cards (UICCs).

[0006]

Here, when contactless communication is performed between an external apparatus and an information processing system, it is desirable to prevent a process related to contactless communication from being interrupted and to continue the process related to the contactless communication. However, for example, when an existing information processing system cannot receive a magnetic field (carrier) of a predetermined frequency, the information processing system determines that a process related to the contactless communication is uniformly terminated regardless of a situation. Consequently, the existing information processing system lacks flexibility.

[0007]

~~The~~Embodiments of the present invention ~~disclosure proposes~~disclose a novel and improved information processing apparatus, transmission control method, program, and information processing system capable of continuing a process related to contactless communication.

Solution to Problem

[0008]

According to ~~the present disclosure~~a first aspect of the present invention, there is provided an information

processing apparatus including: a transmission control unit configured to, when first carrier information indicating that no carrier is detected is acquired from a communication control apparatus capable of performing contactless communication using a carrier with an external apparatus, control a timing at which the acquired first carrier information is transmitted to a transmission object configured to execute a predetermined process according to the first carrier information. The transmission control unit transmits the first carrier information to the transmission object when a set waiting time has elapsed after the first carrier information was acquired. The transmission control unit does not transmit the first carrier information to the transmission object when second carrier information indicating that the carrier is detected is acquired before the waiting time has elapsed.

[0009]

According to ~~the present disclosure~~ a second aspect of the present invention, there is provided a transmission control method to be executed by an information processing apparatus, the transmission control method including: a step of controlling, when first carrier information indicating that no carrier is detected is acquired from a communication control apparatus capable of performing contactless communication using a carrier with an external apparatus, a timing at which the acquired first carrier information is transmitted. In the controlling step, the first carrier information is transmitted when a set waiting time has elapsed after the first carrier information was acquired, and the first carrier information is not transmitted when second carrier information indicating that the carrier is detected is acquired before the waiting time has elapsed.

[0010]

According to ~~the present disclosure~~ a third aspect of the present invention, there is provided a program for causing a computer to execute: a step of controlling, when first carrier information indicating that no carrier is detected is acquired from a communication control apparatus capable of performing contactless communication using a carrier with an external apparatus, a timing at which the acquired first carrier information is transmitted. In the controlling step, the first carrier information is transmitted when a set waiting time has elapsed after the first carrier information was acquired, and the first carrier information is not transmitted when second carrier information indicating that the

carrier is detected is acquired before the waiting time has elapsed.

[0011]

According to ~~the present disclosure~~ a fourth aspect of the present invention, there is provided an information processing system including: an information processing apparatus; an antenna; and a communication control apparatus capable of communicating with the information processing apparatus and performing contactless communication using a carrier with an external apparatus via the antenna. The information processing apparatus includes a transmission control unit configured to, when first carrier information indicating that no carrier is detected is acquired from the communication control apparatus, control a timing at which the acquired first carrier information is transmitted to a transmission object configured to execute a predetermined process according to the first carrier information. The transmission control unit transmits the first carrier information to the transmission object when a set waiting time has elapsed after the first carrier information was acquired. The transmission control unit does not transmit the first carrier information to the transmission object when second carrier information indicating that the carrier is detected is acquired before the waiting time has elapsed.

Advantageous Effects of Invention

[0012]

According to embodiments the present ~~disclosure~~invention, it is possible to continue a process related to contactless communication.

[0013]

In addition, the effects described in the present specification are merely illustrative and demonstrative, and not limitative. In other words, ~~the technology according to~~ embodiments of the present ~~disclosure~~invention can exhibit other effects that are evident to those skilled in the art along with or instead of the effects based on the present specification.

Brief Description of Drawings

[0014]