It has been found to be desirable to enable the retention property to be maintained, and also to enable the writing processing time to be shortened.

According to a first aspect, there is provided a communication device comprising: communication means configured to perform proximity communication with a reader/writer; and control means configured to control writing of data as to nonvolatile memory in accordance with a command from said reader/writer; wherein a portion of the storage region of said nonvolatile memory is a user block that is a storage region equivalent to the minimum unit assigned to a service; and wherein said user block includes a plurality of units; and wherein said units include one or more pages that are the storage regions of a predetermined unit where writing is performed; and wherein at least one unit of a plurality of units making up said user block is a buffer unit that serves as a buffer to buffer data to be written in said user block; and wherein said nonvolatile memory stores control information for controlling the storage region of said nonvolatile memory; and wherein said control information includes a unit number for determining said units; and wherein said control means write data in said buffer unit in accordance with a command from said reader/writer, write the unit number of an object unit that is a unit to be written with data as the unit number of

said buffer unit, and take said object unit as a new buffer unit, thereby performing writing of data in said object unit; and wherein said control means are activated by an RF signal being received from said reader/writer at said communication means, and after activation, erase all of the pages of said buffer unit during activation processing to be performed before receiving a command from said reader/writer.

According to a second aspect, there is provided a communication method for a communication device including communication means configured to perform proximity communication with a reader/writer, and control means configured to control writing of data as to nonvolatile memory in accordance with a command from said reader/writer, said method comprising the steps of: taking a portion of the storage region of said nonvolatile memory as a user block that is a storage region equivalent to the minimum unit assigned to a service; including a plurality of units in said user block; including one or more pages that are the storage regions of a predetermined unit where writing is performed, in said units; taking at least one unit of a plurality of units making up said user block as a buffer unit that serves as a buffer to buffer data to be written in said user block; said nonvolatile memory storing

control information for controlling the storage region of said nonvolatile memory; including a unit number for determining said units, in said control information; causing said control means to write data in said buffer unit in accordance with a command from said reader/writer, to write the unit number of an object unit that is a unit to be written with data as the unit number of said buffer unit, and to take said object unit as a new buffer unit, thereby performing writing of data in said object unit; and activating said control means by an RF signal being received from said reader/writer at said communication means to erase all of the pages of said buffer unit during activation processing to be performed before receiving a command from said reader/writer.

~~A communication device according to an embodiment of the present invention is~~According to a third aspect, there is provided a communication device including: a communication unit configured to perform proximity communication with a reader/writer; and a control unit configured to control writing of data as to nonvolatile memory in accordance with a command from the reader/writer; with a portion of the storage region of the nonvolatile memory being a user block that is a storage region equivalent to the minimum unit assigned to a service; with the user block including a plurality of units; with the units including one or more pages that are the storage regions of a predetermined unit where writing is performed;

with at least one unit of a plurality of units making up the user block being a buffer unit that serves as a buffer to buffer data to be written in the user block; with the nonvolatile memory storing control information for controlling the storage region of the nonvolatile memory; with the control information including a unit number for determining the units; with the control unit writing data in the buffer unit in accordance with a command from the reader/writer, writing the unit number of an object unit that is a unit to be written with data as the unit number of

the buffer unit, and taking the object unit as a new buffer unit, thereby performing writing of data in the object unit; and with the control unit being activated by an RF signal being received from the reader/writer at the communication unit, and after activation, erasing all of the pages of the buffer unit during activation processing to be performed before receiving a command from the reader/writer.

~~A communication method according to an embodiment of the present invention is~~According to a fourth aspect, there is provided a communication method for a communication device including a communication unit configured to perform proximity communication with a reader/writer, and a control unit configured to control writing of data as to nonvolatile memory in accordance with a command from the reader/writer, including the steps of: taking a portion of the store region of the nonvolatile memory as a user block that is a storage region equivalent to the minimum unit assigned to a service; including a plurality of units in the user block; including one or more pages that are the storage regions of a predetermined unit where writing is performed, in the units; taking at least one unit of a plurality of units making up the user block as a buffer unit that serves as a buffer to buffer data to be written in the user block; the nonvolatile memory storing control information for controlling the storage region of the nonvolatile memory; including a unit number for

determining the units, in the control information; causing the control unit to write data in the buffer unit in accordance with a command from the reader/writer, to write the unit number of an object unit that is a unit to be written with data as the unit number of the buffer unit, and to take the object unit as a new buffer unit, thereby performing writing of data in the object unit; and activating the control unit by an RF signal being received from the reader/writer at the communication unit to erase all of the pages of the buffer unit during activation processing to be performed before receiving a command from the reader/writer.

With the above ~~embodiment~~aspects, a portion of the storage region of the nonvolatile memory is a user block that is a storage region equivalent to the minimum unit assigned to a service, the user block includes a plurality of units, the units include one or more pages that are the storage regions of a predetermined unit where writing is performed, at least one unit of a plurality of units making up the user block is a buffer unit that serves as a buffer to buffer data to be written in the user block, the nonvolatile memory stores control information for controlling the storage region of the nonvolatile memory, the control information includes a unit number for determining the units, the control unit writes data in the buffer unit in accordance with a command