
ID 番 号: 00031 受験番号: 08IPE003

級/科目:「1級/電気・電子工学」

※以下に解答を設置問題順に記入してください。

1. A cell phone comprising:

a unit for acquiring information indicating a position of the cell phone;

a unit for storing a phone number used when originating a call;

a display data selection unit for selecting a phone number in an area indicated by the position information from among phone numbers stored in the storage unit; and

a display unit for displaying a phone number selected by the display data selection unit.

2. The cell phone according to claim 1, wherein

the position information acquisition unit includes at least one of:

- (i) a unit for acquiring information indicating a position of the cell phone using a signal transmitted from a GPS (Global Positioning System) satellite;
- (ii) a unit for acquiring information indicating a position of the cell phone using latitude information and longitude information transmitted from a base station; and
- (iii) a unit for acquiring information indicating a position of the cell phone using position information transmitted from a base station.

As for lighting systems using a solar battery, a cost that occurs in proportion to usage thereof is extremely low in principle, and the initial installation cost occupies a substantial part of the overall cost. For this reason, if a solar battery or a storage battery having a large capacity is used to obtain a high lighting capability, the equipment cost becomes comparatively expensive. Therefore, if a lighting system is installed once, it is desired to make full use of the capabilities thereof. On the other hand, in terms of the functions of a lighting system, it is also important that the lighting system causes no power failure and can light up at any time if necessary. In this case, the lighting system is not required to have a very high lighting capability and it is generally allowable that the lighting system has a minimum lighting capability. In this regard, if the lighting system uses a solar battery or a storage battery having a large capacity, the lighting system has an excess of lighting capability. Thus, the

equipment cost is significantly wasted.

Incidentally, it has been proposed that over-discharge of a storage battery be prevented by setting the lighting time in accordance with the remaining capacity of the storage battery (for example, see Japanese Unexamined Utility Model Registration Application Publication No. 12-345678). However, this related-art example simply adjusts the lighting time and does not have a function that prevents a power failure and enables lighting at any time if necessary. This makes the related-art example an inadequate lighting system.

Fig. 2 shows a backlight lighting control procedure performed by a microcomputer 73. When the power supply switch 7 is turned on, a memory in the microcomputer 73 is initialized (step 1) and then the switch 78 is closed so that a backlight 75a is lighted (step 2). Subsequently, when an input process (step 3) using an operation keyboard 72 is performed, it is determined whether the inputted information is a communication-related command (step 4). If the inputted information is a communication-related command, the switch 78 is opened so that the backlight is turned out (step 5). Subsequently, a predetermined communication command process (step 8) is performed. Upon completion of the process, the backlight is lighted again (step 8). If it is determined that the inputted information is not a communication-related command (in step 4), a predetermined command process (step 7) is performed with the backlight staying on.

As a result, power can be saved due to light-out of the backlight during communication, when power is heavily consumed, and the life of the battery can be extended. Since display on a liquid crystal display unit 71 is required when the operation keyboard 72 is being operated and after data is read out from a data carrier 1, it is no problem to turn out the backlight during communication.