around by making a turn by 180 degrees, so that the tractor **1** reaches the next straight path **71**. The travel paths created in this way are stored in the wireless communication terminal **46**.

[0063] The user appropriately operates the wireless communication terminal **46** to input (transfer) the information of the travel paths created by the travel path creation unit **35** to the control unit **4** of the tractor **1**. Thereafter, the user makes the tractor **1** travel and locates the tractor **1** at the start position of the travel paths. Subsequently, the user operates the wireless communication terminal **46** to provide an instruction for starting autonomous traveling. Accordingly, the tractor **1** performs work while traveling along the straight paths **71** and the turning paths **72**.

[0064] The reference auxiliary line creation unit **36** and the adjacent auxiliary line creation unit **37** perform a process of creating auxiliary lines to be used for autonomous traveling in the headland area. When the user performs a predetermined operation on the wireless communication terminal **46**, the tractor **1** autonomously travels along an auxiliary line. Note that, in the configuration of the present embodiment, turning, switching between driving and stopping of the work machine **3**, etc., in the headland area are performed based on an operation by the user and are not autonomously performed by the tractor **1**. Further, such a configuration in which the tractor **1** autonomously performs these processes is also possible. Note that the processing performed by the auxiliary line selection unit **38** and the selection processing unit **39** will be described later.

[0065] Hereinafter, the auxiliary lines created by the reference auxiliary line creation unit **36** and the adjacent auxiliary line creation unit **37** will be explained in detail. The reference auxiliary line creation unit **36** and the adjacent auxiliary line creation unit **37** are capable of creating two types of auxiliary lines according to instructions from the user, etc. The first auxiliary lines are auxiliary lines to be used in a case where such work in which it is required to eliminate remaining work (for example, tillage) is performed in the headland area. The second auxiliary lines are auxiliary lines to be used in a case where such work in which the work pitch is desired to be constant even though remaining work occurs (seeding, ridging, etc.) is performed in the headland area.

[0066] First, with reference to FIG. **5** through FIG. **7**, an explanation is given of the method for creating the first auxiliary lines. As illustrated in FIG. **5**, the first auxiliary lines include a first reference auxiliary line **81** and a first adjacent auxiliary line **82**.

[0067] First, the farm field acquisition unit **34** acquires information of the farm field for which the first auxiliary lines are created (S**101**). The information acquired here includes, for example, the positions of the peripheral edges (outlines) of the farm field, the work area, and the headland area.

[0068] Next, the reference auxiliary line creation unit **36** creates the first reference auxiliary line **81**, which is distant (offset) inward from the farm field peripheral edge (each side configuring the peripheral outline of the farm field) by the first reference interval T**1** (S**102**). Therefore, the first reference auxiliary line **81** is parallel to the farm field peripheral edge (basically parallel to the work area peripheral edge as well). Further, since the first reference auxiliary line **81** is created for each side of the farm field peripheral edge, four first reference auxiliary lines **81** are created in a case where the farm field is a quadrangle. Further, as illustrated in FIG. **7**, the first reference interval T**1** is ½ of the work width W**1** or ½ of the work machine width W**2**. Note that it is preferable that the first reference interval T**1** is ½ of the wider one of the work width W**1** and the work machine width W**2**. Accordingly, in a case where the tractor **1** travels along the first reference auxiliary line **81**, it is possible to prevent the work from being performed outside the farm field and to prevent the work machine from getting out of the farm field.

[0069] Next, the adjacent auxiliary line creation unit **37** creates a first adjacent auxiliary line **82**, which is distant (offset) inward from the first reference auxiliary line **81** by the auxiliary line interval S (S**103**). Therefore, the first adjacent auxiliary line **82** is parallel to the first reference auxiliary line **81**. Further, as illustrated in FIG. **7**, the auxiliary line interval S corresponds to the value obtained by subtracting the overlap amount R from the work width W**1** or the value obtained by adding the work interval D to the work width W**1**. Note that, although the overlap amount R and the work interval D correspond to the same values as those used when creating the straight paths **71**, it is also possible to use different values. Further, the auxiliary line interval S and the work width W**1** may have the same value (in other words, the overlap amount R or the work interval D may be zero).

[0070] The adjacent auxiliary line creation unit **37** creates zero, one, or multiple first adjacent auxiliary lines **82**. The specific creating number is as follows. That is, the number of first auxiliary lines to be created for one side of the farm field peripheral edge (that is, the total number of first reference auxiliary lines **81** and first adjacent auxiliary lines **82** to be created) corresponds to the value obtained by rounding up the decimal places of the headland width L divided by the auxiliary line interval S. The headland width L is the distance from the farm field peripheral edge to the work area. By rounding up the decimal places, the work can be performed for the entire headland area (except for the work interval D for the work width W**1**). Depending on the conditions, the first adjacent auxiliary line **82** may be created on the work area (even in this case, the present path is for performing the work in the headland area). Further, in a case where the headland widths L are different depending on the sides of the farm field peripheral edge, the number of first auxiliary lines to be created may differ depending on the side.

[0071] Further, although the edge points of the first reference auxiliary lines **81** and the first adjacent auxiliary lines **82** are aligned with the farm field peripheral edge in the present embodiment, it is also possible that these edge points are set at positions different from the farm field peripheral edge (for example, distant positions). That is, since turning of the tractor **1** is started at the discretion of the user, there is no problem even though the first reference auxiliary lines **81** and the first adjacent auxiliary lines **82** are long.

[0072] Next, with reference to FIG. **8** through FIG. **10**, an explanation is given of the method for creating the second auxiliary lines. In the following explanation, the explanations for the parts common to the method for creating the first auxiliary lines may be simplified or omitted. As illustrated in FIG. **8**, the second auxiliary lines include a second reference auxiliary line **91** and a second adjacent auxiliary line **92**.