CLAIMS

[Claim 1] A target tracking device for tracking a target TG, comprising:

a memory storing at least one instruction; and

at least one processor executing the at least one instruction,

wherein the at least one processor:

performs a guidance process to approach the target,

performs a first guidance process at a first tracking time point to track the target in a certain manner, and

performs a second guidance process at a second tracking time point, which is chronologically subsequent to the first tracking time point, to track the target in a manner different from the certain manner.

[Claim 2] The target tracking device according to claim 1, wherein the first guidance process and the second guidance process:

differ in at least one of a separation distance between the target tracking device and the target, a tracking direction of the target tracking device, and data used to identify the target in each of the first guidance process and the second guidance process.

[Claim 3] The target tracking device according to claim 2, wherein the processor:

controls the target tracking device to track the target at a predetermined separation

distance in the first guidance process, and

controls the target tracking device to approach the identified target and collide with the target in the second guidance process.

[Claim 4] The target tracking device according to claim 2, wherein the processor:

controls the target tracking device to track and approach the identified target from below in the second guidance process.

[Claim 5] The target tracking device according to claim 1, wherein the processor:

identifies the target based on at least one of first data and second data.

[Claim 6] The target tracking device according to claim 5, wherein:

the first data comprises data acquired through a radar, and

the second data comprises data acquired through a camera.

[Claim 7] The target tracking device according to claim 5, wherein the processor:

performs the first guidance process based on at least one of the first data and the second data at the first tracking time in the first guidance process, and

performs the second guidance process based on the second data at the second tracking time in the second guidance process.

[Claim 8] The target tracking device according to claim 7, wherein the processor:

performs the first guidance process by setting a flight trajectory to approach the target based on the position information of the target included in the first data in the first guidance process.

[Claim 9] The target tracking device according to claim 7, wherein the processor:

performs the first guidance process by combining the first data and the second data in the first guidance process.

[Claim 10] The target tracking device according to claim 9, wherein the processor:

in the first guidance process,

determines the relationship between the position information of the target included in the first data and the position information of the target tracking device,

determines a search range for identifying the target based on the determined relationship, and

performs the first guidance process by identifying the target based on the second data within the determined search range and setting a flight trajectory to approach the target.