invention, in a case where the probability is lower than a predetermined determination threshold value, the selection unit omits processing of selecting the one element on the basis of a result of the model checking.

[0016]

According to a ~~seventh~~ eighth aspect of the present invention, the validation processing method includes: a step of performing model checking on a model to be checked; a step of selecting, on the basis of a result of the model checking, one element among elements that have undergone a state change in a process leading to an unsafe event; and a step of performing model re-checking on a model to be checked which is obtained by excluding the one element.

[0017]

According to an ~~eighth~~ ninth aspect of the present invention, a program causes a computer of a validation processing device to execute: a step of performing model checking on a model to be checked; a step of selecting, on the basis of a result of the model checking, one element among elements that have undergone a state change in a process leading to an unsafe event; and a step of performing model re-checking on a model to be checked which is obtained by excluding the one element.

[Advantageous Effects of Invention]

~~Claims~~

~~[Claim 1]~~

CLAIMS

1. A validation processing device comprising:

a processing unit that performs model checking on a model to be checked; and

a selection unit that selects, on the basis of a result of the model checking, one element among elements that have undergone a state change in a process leading to an unsafe event,

wherein the processing unit further performs model re-checking on a model to be checked which is obtained by excluding the one element.

~~[Claim 2]~~

. The validation processing device according to claim 1, wherein in a case where the model to be checked has not led to the unsafe event in the model re-checking, the processing unit returns the one element to the model to be checked, and performs model re-checking on a model to be checked which is obtained by excluding an element, which is different from the one element, from the model to be checked.

~~[Claim 3]~~

. The validation processing device according to claim 2, wherein in a case where the model to be checked has led to the unsafe event in the model re-checking, the processing unit

does not return the one element to the model to be checked, and performs model re-checking on a model to be checked which is obtained by excluding an element, which is different from the one element, from the model to be checked.

~~[Claim 4]~~

. The validation processing device according to ~~any one of claims~~claim 1 ~~to 3~~,

wherein the processing unit performs the model re-checking within a range equal to or less than the number of transition steps leading up to the unsafe event specified in a first model checking for the model to be checked.

~~[Claim 5]~~

. The validation processing device according to ~~any one of claims~~claim 1 ~~to 4~~, further comprising a specification unit that specifies a shortest path from an element extracted on the basis of a result of the model re-checking to an element included in a definition of the unsafe event.

~~[Claim 6]~~

. The validation processing device according to ~~any one of claims~~claim 1 ~~to 5~~, further comprising a calculation unit that calculates a probability of leading the model to be checked to the unsafe event from an initial state, on the basis of a trouble occurrence probability defined for each element.

~~[Claim 7]~~

. The validation processing device according to claim 6, wherein in a case where the probability is lower than a predetermined determination threshold value, the selection unit omits processing of selecting the one element on the basis of a result of the model checking.

~~[Claim 8]~~

. A validation processing method comprising:

a step of performing model checking on a model to be checked;

a step of selecting, on the basis of a result of the model checking, one element among elements that have undergone a state change in a process leading to an unsafe event; and

a step of performing model re-checking on a model to be checked which is obtained by excluding the one element.

~~[Claim 9]~~

~~A~~9. A non-transitory computer-readable medium that stores a program causing a computer of a validation processing device to execute:

a step of performing model checking on a model to be checked;

a step of selecting, on the basis of a result of the model checking, one element among elements that have undergone a state change in a process leading to an unsafe event; and

a step of performing model re-checking on a model to be checked which is obtained by excluding the one element.