

event data as new event data in the set, ~~and~~ an event competition elimination means for, when the new event data is competitive data in which a competition is caused in attribute values of a common attribute with other event data included in the set, excluding the competitive data from the set, and a result output means for outputting a complex event as an analysis result which is an analyzed set of event data, wherein the event evaluation means determines whether to generate the complex event under the predetermined condition, and generates the complex event when determined to generate the complex event, and the result output means outputs the generated complex event.

[0019]

An event processing method according to a second aspect of the present invention includes the steps of storing a set of event data mutually associated under a predetermined condition until a predetermined holding deadline, when newly-input event data meets the predetermined condition, including the event data as new event data in the set, ~~and~~ when the new event data is competitive data in which a competition is caused in attribute values of a common attribute with other event data included in the set, excluding the competitive data

from the set; and outputting a complex event as an
analysis result which is an analyzed set of event data,
wherein the event processing method comprising determining
whether to generate the complex event under the
5 predetermined condition, and generating the complex event
when determined to generate the complex event, and
outputting the generated complex event.

[0020]

10 An event processing program according to a third aspect
of the present invention includes causing a computer to
perform event data storage processing of storing a set of
event data mutually associated under a predetermined condition
until a predetermined holding deadline, event evaluation
15 processing of, when newly-input event data meets the
predetermined condition, including the event data as new event
data in the set, ~~and~~ event competition elimination processing
of, when the new event data is competitive data in which a

competition is caused in attribute values of a common attribute with other event data included in the set, excluding the competitive data from the set, and processing of outputting a complex event as an analysis result which is an analyzed set of event data, wherein the event processing program causing the computer to perform, processing of determining whether to generate the complex event under the predetermined condition, and generating the complex event when determined to generate the complex event, and processing of outputting the generated complex event.

Advantageous Effects of Invention

[0021]

According to embodiments of the present invention, it is possible to eliminate an inconsistency between events in sequential processing in complex event processing for taking input events acquired from many origination sources.

Brief Description of Drawings

[0022]

[Fig. 1] It depicts a block diagram illustrating an exemplary structure of an event processing device according to a first exemplary embodiment.

[Fig. 2] It depicts a flowchart illustrating the operations of the event processing device.

[Fig. 3] It depicts an explanatory diagram illustrating exemplary events input into the event processing device.

[Fig. 4] It depicts a state transition diagram illustrating exemplary rules used in the event processing device.

[Fig. 5] It depicts an explanatory diagram illustrating an exemplary concept dictionary used in the event processing device.

[Fig. 6] It depicts an explanatory diagram illustrating an exemplary complex event output from the event processing

CLAIMS

[Claim 1]

An event processing device comprising:

an event data storage means for storing a set of
5 event data mutually associated under a predetermined
condition until a predetermined holding deadline;

an event evaluation means for, when newly-input event
data meets the predetermined condition, including the event
data as new event data in the set; ~~and~~

10 an event competition elimination means for, when the
new event data is competitive data in which a competition
is caused in attribute values of a common attribute with
other event data included in the set, excluding the
competitive data from the set; and

15 a result output means for outputting a complex event
as an analysis result which is an analyzed set of event
data,

wherein the event evaluation means determines whether
to generate the complex event under the predetermined
20 condition, and generates the complex event when determined
to generate the complex event, and

the result output means outputs the generated complex
event.

[Claim 2]

25 The event processing device according to claim 1,
comprising:

an event holding deadline update means for updating a
holding deadline of event data associated under the
predetermined condition in accordance with a holding
30 deadline of newly-input event data.

[Claim 3]

The event processing device according to claim 1 or 2,

wherein when determining whether event data mutually
associated under a predetermined condition are competitive
35 data having different values of a common attribute, the
event competition elimination means does not determine

whether the event data are competitive data by comparing values of a specific attribute.

~~[Claim 4]~~

5 ~~The event processing device according to any one of claims 1 to 3, comprising:~~

~~—— a result output means for outputting a complex event as an analysis result which is an analyzed set of event data,~~

10 ~~—— wherein the event evaluation means determines whether to generate the complex event under a predetermined condition, and generates the complex event when determined to generate the complex event, and~~

15 ~~—— the result output means outputs the generated complex event.~~

[Claim 54]

 The event processing device according to any one of claims 1 to 43, comprising:

20 a rule storage means for storing a concept dictionary defining a relationship between other attribute and its attribute value derived from one attribute or attribute value,

25 wherein the event evaluation means develops other attribute and its attribute value from the concept dictionary based on an attribute or attribute value included in new event data, and

30 the event competition elimination means determines whether new event data is competitive data by use of the developed attribute and attribute value.

[Claim 65]

An event processing method comprising the steps of:
storing a set of event data mutually associated under
a predetermined condition until a predetermined holding
5 deadline;

when newly-input event data meets the predetermined
condition, including the event data as new event data in
the set;~~and~~

when the new event data is competitive data in which
10 a competition is caused in attribute values of a common
attribute with other event data included in the set,
excluding the competitive data from the set;~~and~~

outputting a complex event as an analysis result
which is an analyzed set of event data,

15 wherein the event processing method comprising
determining whether to generate the complex event
under the predetermined condition, and generating the
complex event when determined to generate the complex event,
and

20 outputting the generated complex event.

[Claim 76]

The event processing method according to claim 65,
comprising the step of:

25 updating a holding deadline of event data associated
under the predetermined condition in accordance with a
holding deadline of newly-input event data.

[Claim 87]

An event processing program for causing a computer to
perform:

30 event data storage processing of storing a set of
event data mutually associated under a predetermined
condition until a predetermined holding deadline;

event evaluation processing of, when newly-input
event data meets the predetermined condition, including the
35 event data as new event data in the set;~~and~~

event competition elimination processing of, when the new event data is competitive data in which a competition is caused in attribute values of a common attribute with other event data included in the set, excluding the competitive data from the set; and

processing of outputting a complex event as an analysis result which is an analyzed set of event data, wherein the event processing program causing the computer to perform,

processing of determining whether to generate the complex event under the predetermined condition, and generating the complex event when determined to generate the complex event, and

processing of outputting the generated complex event.

[Claim 98]

The event processing program according to claim 87, the program for causing a computer to perform:

event holding deadline update processing of updating a holding deadline of event data associated under the predetermined condition in accordance with a holding deadline of newly-input event data.