DISCLOSURE OF THE INVENTION

[0017]

According to a first aspect of the present invention, there is provided a synonym relation determination device, comprising: a synonym expression candidate storage unit in which a prescribed synonym source expression and a plurality of synonym expression candidates as targets of a synonym relation are recorded in a mutually corresponding manner; and synonym relation determination/specification means for determining and specifying a synonym relation between the synonym expression candidates and the synonym source expression in texts inputted from outside based on a specific standard, wherein the synonym relation determination/specification means comprises: text gathering means for gathering the texts inputted from outside, and generating a text set whose issuing time can be specified; synonym candidate detection means for specifying and outputting a time interval where the synonym expression candidates are detected many times and a time interval where the synonym source expression is detected many times from the text set gathered by the text gathering means; and synonym period specification means for determining and specifying a time interval in which the synonym expression candidate and the synonym source expression are in a synonym relation as a synonym period based on a positional relation between the time interval where the synonym expression candidate is detected in the text set and the time interval where the synonym source expression is detected in the text set and based on detection frequency thereof.

~~In order to achieve the foregoing object, the~~ A synonym relation determination device according to an embodiment of the present invention includes: a synonym expression candidate storage unit in which a prescribed synonym source expression and a plurality of synonym expression candidates as targets of the synonym relation are recorded in a mutually corresponding manner; and a synonym relation determination/specification module which determines and specifies a synonym relation between the synonym expression candidates and the synonym source expression in texts inputted from outside based on a specific standard.

Further, the synonym relation determination/specification module includes: a text gathering unit which gathers the texts inputted from outside, and generates a text set whose issuing time can be specified; a synonym candidate detection module which specifies and outputs a time interval where the synonym expression candidates are detected many times and a time interval where the

synonym source expression is detected many times from the text set gathered by the text gathering unit 14; and a synonym period specification module which determines and specifies a time interval in which the synonym expression candidate and the synonym source expression are in a synonym relation as a synonym period based on a positional relation between the time interval where the synonym expression candidate is detected in the text set and the time interval where the synonym source expression is detected in the text set and based on detection frequency thereof.

[0018]

According to a second aspect of the present invention, there is provided a synonym relation determination method used for a synonym relation determination device comprising: a synonym expression candidate storage unit in which a prescribed synonym source expression and a plurality of synonym expression candidates as targets of a synonym relation are recorded in a mutually corresponding manner; and a synonym relation determination/specification module which determines and specifies a synonym relation between the synonym expression candidates and the synonym source expression in texts inputted from outside based on a specific standard, wherein: a text gathering unit of the synonym relation determination/specification module gathers the texts inputted from outside and generates a text set whose issuing time can be specified based thereupon; the synonym relation determination/specification module determines and specifies a synonym relation between the synonym expression candidate and the synonym source expression contained in the generated text set based on a specific standard; in a step for specifying the synonym relation, a synonym candidate detection unit of the synonym relation determination/specification module searches and specifies a time interval where the synonym expression candidates are detected many times and a time interval where the synonym source expression is detected many times from the text set gathered, respectively; and then, a synonym period specification unit of the synonym relation determination/specification module determines and specifies a time interval in which the synonym expression candidate and the synonym source expression are in a synonym relation as a synonym period based on a positional relation between the time interval where the synonym expression candidate is detected in the text set and the time interval where the synonym source expression is detected in the text set and based on detection frequency thereof.

~~In order to achieve the foregoing object, the~~A synonym relation determination method according

to an embodiment of the present invention is used for a synonym relation determination device which includes: a synonym expression candidate storage unit in which a prescribed synonym source expression and a plurality of synonym expression candidates as targets of the synonym relation are recorded in a mutually corresponding manner; and a synonym relation determination/specification module which determines and specifies a synonym relation between the synonym expression candidates and the synonym source expression in texts inputted from outside based on a specific standard, wherein:

a text gathering unit of the synonym relation determination/specification module gathers the texts inputted from outside and generates a text set whose issuing time can be specified based thereupon (a text gathering/generating step);

the synonym relation determination/specification unit determines and specifies a synonym relation between the synonym expression candidate and the synonym source expression contained in the generated text set based on a specific standard (a synonym relation determining/specifying step);

in a step for specifying the synonym relation, a synonym candidate detection module of the synonym relation determination/specification unit searches and specifies a time interval where the synonym expression candidates are detected many times and a time interval where the synonym source expression is detected many times from the text set, respectively (a synonym candidate detecting step); and

subsequently, a synonym period specification module of the synonym relation determination/specification unit determines and specifies a time interval in which the synonym expression candidate and the synonym source expression are in a synonym relation as a synonym

period based on a positional relation between the time interval where the synonym expression candidate is detected in the text set and the time interval where the synonym source expression is detected in the text set and based on detection frequency thereof (synonym period specifying step).

[0019]

According to a third aspect of the present invention, there is provided a synonym relation determination program used for a synonym relation determination device comprising: a synonym expression candidate storage unit in which a prescribed synonym source expression and a plurality of synonym expression candidates as targets of a synonym relation are recorded in a mutually corresponding manner; and a synonym relation determination/specification module which determines and specifies a synonym relation between the synonym expression candidates and the synonym source expression in texts inputted from outside based on a specific standard, the program including: a text gathering/generation processing function which gathers the texts inputted from outside and generates based thereupon a text set whose issuing time can be specified; and a synonym relation specification processing function which executes processing for determining and specifying a synonym relation between the synonym expression candidate and the synonym source expression contained in the generated text set based on a specific standard; wherein: the synonym relation specification processing function includes a synonym candidate detection processing function which executes processing for searching and specifying a time interval where the synonym expression candidates are detected many times and a time interval where the synonym source expression is detected many times from the text set gathered by the text gathering unit, respectively, and a synonym period specification processing function which determines and specifies a time interval in which the synonym expression candidate and the synonym source expression are in a synonym relation as a synonym period based on a positional relation between the time interval where the synonym expression candidate is detected in the text set and the time interval where the synonym source expression is detected in the text set and based on detection frequency thereof; and the program causes a computer provided to the

synonym relation determination/specification module to execute each of the processing functions.

~~In order to achieve the foregoing object, the~~A synonym relation determination program according to an embodiment of the present invention is used for a synonym relation determination device which includes: a synonym expression candidate storage unit 10 in which a prescribed synonym source expression and a plurality of synonym expression candidates are recorded in a mutually corresponding manner; and a synonym relation determination/specification module which determines and specifies a synonym relation between the synonym expression candidates and the synonym source expression in texts inputted from outside based on a specific standard, and the program includes:

a text gathering/generation processing function which gathers the texts inputted from outside and generates based thereupon a text set whose issuing time can be specified; and a synonym relation specification processing function which executes processing for determining and specifying a synonym relation between the synonym expression candidate and the synonym source expression contained in the generated text set based on a specific standard, wherein:

the synonym relation specification processing function includes a synonym candidate detection processing function which executes processing for searching and specifying a time interval where the synonym expression candidates are detected many times and a time interval where the synonym source expression is detected many times from the text set gathered by the

text gathering unit, respectively, and a synonym period specification processing function which determines and specifies a time interval in which the synonym expression candidate and the synonym source expression are in a synonym relation as a synonym period based on a positional relation between the time interval where the synonym expression candidate is detected in the text set and the time interval where the synonym source expression is detected in the text set and based on detection frequency thereof; and

the program causes a computer provided to the synonym relation determination/specification module to execute each of the processing functions.

[0020]

As described above, embodiments of the present invention ~~is~~ are structured to determine the synonymity by capturing the point at which the synonym expression candidates appeared many times, so that the start time at which the synonym relation is established can be outputted. Therefore, it becomes possible to provide the excellent synonym relation determination device, synonym relation determination method, and program thereof, which are not in the related techniques described above and capable of determining the time interval where the synonym relation is established when the synonymity changes over time.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram showing a first embodiment of a synonym relation determination device according to the present invention;

FIG. 2 is an explanatory chart showing an example of a synonym candidate list used in FIG. 1;

FIG. 3 is an explanatory chart showing examples of time transition regarding occurrence