

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2025/015769

International filing date (day/month/year)
13/02/2025

Priority date (day/month/year)
13/02/2024

International Patent Classification (IPC) or both national classification and IPC
INV. G06F16/13 G06F16/358 G06F16/22 H04M3/493

Applicant
GENESYS CLOUD SERVICES, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:

 European Patent Office
80298 MUNICH
GERMANY
Telephone No. + 49 (0)89 2399-0

Date of completion of
this opinion
see form
PCT/ISA/210

Authorised Officer

Chabot, Pedro

Telephone No. + 49 (0)89 2399-0



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
- ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
- a. ☐ forming part of the international application as filed.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),
 - ☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-20</u>
	No: Claims	

Inventive Steps (IS)	Yes: Claims	<u>1-20</u>
	No: Claims	

Industrial applicability (IA)	Yes: Claims	<u>1-20</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1 US 2015/286677 A1 (CHIU CHI-HSIEN [US] ET AL) 8 October 2015 (2015-10-08)
- D2 NEIL V MURRAY ET AL: "Reduced Implicate/Implicant Tries", 20 May 2008 (2008-05-20), FOUNDATIONS OF INTELLIGENT SYSTEMS; [LECTURE NOTES IN COMPUTER SCIENCE], SPRINGER BERLIN HEIDELBERG, BERLIN, HEIDELBERG, PAGE(S) 203 - 214, XP019075424, ISBN: 978-3-540-68122-9
- D3 US 2021/294782 A1 (FU CHEN [US]) 23 September 2021 (2021-09-23)

1. D1 is regarded as being the prior art closest to the subject-matter of claim 1, and discloses:

A method for providing efficient trie data structure processing, the method comprising: splitting, by a computing system and based on organization identifiers and sequence identifiers, a data frame indicative of a set of events associated with customer interactions with automated agents of a contact center to produce a set of multiple partitions (Par. 28-31);
~~producing, by the computing system, a set of multiple trie data structures, including generating a trie data structure for each partition, wherein each trie data structure represents aggregate counts of a corresponding subset of event sequences associated with a corresponding organization;~~
merging, by the computing system, multiple trie data structures ~~of the set of trie data structures to produce a combined organization trie data structure~~ (See par. 101); and storing, by the computing system, the combined organization trie data structure to enable generation of a visualization of the combined organization trie data structure (See par. 102-106).

2. The subject-matter of claim 1 therefore differs from this known method in that the data frames are produced by a contact center and in that produces a set of multiple trie data for each partition representing a sub-set of events associated with the organization and is therefore new (Article 33(2) PCT).

4. The problem to be solved by the present invention may be regarded as how to improve the trie data processing.

5. The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

Nothing in D1 suggest the same processing for producing the set of tries. Further D1 relies in using Probabilistic Prefix Tree Automation that has a probabilistic approach based on the amount of events of each type, which already introduces a simplification of the tree and improves its processing, hence the person skilled in the art will have no motivation to change the solution of D1. D2 proposes a simplification fo the tries to improve the trie processing, but will not allow reaching the claimed solution. D3 does no provide any better teaching to hinder the inventiveness of claim 1.

6. Claims 2-9 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

7. The same arguments apply to corresponding claims 10-20, system and machine readable media claims corresponding to claims 1-9.