

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

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

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/US2024/054140

International filing date (day/month/year)
01.11.2024

Priority date (day/month/year)
02.11.2023

International Patent Classification (IPC) or both national classification and IPC
INV. G06F16/958 G06Q30/0202

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 66.1bis(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:



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Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Frank, Korbinian

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

2. Citations and explanations

see separate sheet

1 **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 2021/203784 A1 (KONIG YOCHAI [US] ET AL) 1 July 2021
(2021-07-01)

D2 US 2023/029355 A1 (DOUMAR STEVE [US] ET AL) 26 January 2023
(2023-01-26)

1.1 **Article 33(3) PCT**

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 - 20 does not involve an inventive step in the meaning of Article 33(3) PCT.

1.1.1 **Claim 1**

1.1.1.1 Document D1 is regarded as the closest prior art. It discloses the following features of claim 1 (indicated in italics below, undisclosed elements struck-out):

F1) *A computer-implemented method for use in a contact center for classifying customers as being a member of target audience via operation of a predictive model,*

See D1, §§173, 174 in combination with Claim 1.

F2) *the predictive model being configured to output a probability score for each of the customers that expresses a probability that the customer will achieve a predicted outcome, the method comprising the steps of:*

See D1, §212: The likelihood of success corresponds to the probability score.

F3) ~~recording previous probability scores, wherein each of the previous probability scores comprise a probability score output by the predictive model in relation to a previous interaction conducted by the contact center with respect to a previous customer, and grouping the recorded previous probability scores within a dataset;~~

See D1, §§177, 178: All previous interactions are recorded to update a user profile

F4) ~~sorting the previous probability scores of the dataset in order of an increasing value;~~

F5) ~~deriving a set of reference quantiles based on the sorted previous probability scores contained in the dataset, wherein the deriving the set of the reference quantiles comprises dividing the sorted previous probability scores into a number of equal sized quantiles;~~

F6) ~~determining one or more action thresholds, the one or more action thresholds defining a range of target quantiles within the set of reference quantiles;~~

See D1, §82: the threshold confidence level is the action threshold deciding which action to take.

F7) ~~receiving an output of a probability score from the predictive model for a first customer that is interacting with the contact center during a current interaction;~~

See D1, §82: the confidence level corresponds to a probability score.

F8) ~~comparing the probability score of the first customer to the previous probability scores contained within the quantiles of the set of reference quantiles to determine a matching quantile therewithin for the probability score of the first customer; and~~

F9) ~~determining if the matching quantile is within the range of target quantiles and, based thereon, selectively classifying the first customer as being a member of the target audience.~~

See D1, §82 in combination with §174.

1.1.1.2 Hence, claim 1 differs from D1 in the following differentiating feature:

U1) ~~recording previous probability scores, wherein each of the previous probability scores comprise a probability score output by the predictive model in relation to a previous interaction conducted by the contact center with respect to a previous customer, and grouping the recorded previous probability scores within a dataset;~~

U2) ~~sorting the previous probability scores of the dataset in order of an increasing value;~~

U3) ~~deriving a set of reference quantiles based on the sorted previous probability scores contained in the dataset, wherein the deriving the set of the reference quantiles comprises dividing the sorted previous probability scores into a number of equal sized quantiles;~~

U4) *the one or more action thresholds defining a range of target quantiles within the set of reference quantiles;*

U5) *comparing the probability score of the first customer to the previous probability scores contained within the quantiles of the set of reference quantiles to determine a matching quantile therewithin for the probability score of the first customer; and*

U6) *determining if the matching quantile is within the range of target quantiles ;*

1.1.1.3 Thus, the subject-matter of claim 1 is new over D1.

1.1.1.4 The differing features U1 - U6 determine the algorithm with which a customer of a contact center is classified as member of a target audience. They represent a mathematical algorithm for determining probabilities and comparing them to groups of previous probabilities, i.e. a mathematical algorithm in the meaning of the Guidelines GL/PCT-EPO, G-II, 3.3. These Guidelines stipulate that mathematical algorithms contribute to the technical character of a claim if they serve a specific technical purpose.

1.1.1.5 The classification as such is not considered as a technical purpose, cf. Guidelines GL/PCT-EPO, G-II, 3.3, in combination with EPO Guidelines G-II, 3.3.1, and the optimisation of the use of resources or potential benefits (by defining a target audience) are business purposes, cf. Guidelines GL/PCT-EPO, G-II, 3.5, in combination with EPO Guidelines G-II, 3.5.3.

1.1.1.6 Features can also contribute to the technical character if they serve a further technical effect (see PCT Guidelines A9.15[2]) or are based on further technical considerations. As the claim, however, does not make reference to a specific computing environment, let alone a concrete implementation thereon, no technical contribution is apparent..

1.1.1.7 Therefore, according to the Guidelines GL/PCT-EPO G-VII, 5.4, the distinguishing features U1 - U6 are communicated to the skilled person together with the objective technical problem to implement them in the system of D1.

1.1.1.8 The skilled person would do so based on his routine knowledge in a straightforward manner.

1.1.1.9 Therefore, the subject-matter of claim 1 is not regarded as inventive.

1.1.2 Claim 14

The reasoning for claim 1 applies also, mutatis mutandis, to independent claim 14, a system implementing the method of claim 1.

1.1.3 Dependent claims

The dependent claims 2 - 13 and 15 - 20 do not appear to contain any additional feature which, in combination with the features of any claim to which they refer, meets the requirements of the PCT in respect of an inventive step.

1.1.3.1 The additional features of these claims are further details of the algorithm for classifying customers as target audience. For the reasons presented above they are not regarded as making a technical contribution and therefore cannot cause the presence of an inventive step.

1.1.3.2 It is noted that the features defining automated action (claims 2, 3, 15, 16) are anticipated by D1, e.g. §82 by passing a chat to a human agent. Analogously also the live chat or voice communication and web sessions are anticipated (see also §72, §85) regarding claims 6 and 18. Recoding of behavioral data is anticipated by D1, §§177,178, regarding claims 5 and 17. The provision of a user interface according to the requirement to make the thresholds configurable is considered as straightforward for the skilled person.

1.2 Further remarks

1.2.1 The attention of the applicant is also drawn to document D2 in view of which the subject-matter of all the claims of the present application does not appear inventive, either.

1.2.2 Feature F2 contains the expression "a previous interaction conducted by the contact center **with respective to** a previous customer". It is assumed that it should read only "a previous interaction conducted by the contact center [...] **respective to** a previous customer".