(54) Title: SYSTEM AND METHOD FOR EVIDENCE ACCUMULATION AND HYPOTHESIS GENERATION

(57) Abstract: A methodology, a system, and an apparatus is defined for performing evidence-based decision-making about matching a given entity against one or more of a set of known or reference entities. A satisfactory decision is achieved as a function of both potentiality and plausibility, where plausibility refers to the full set of values gathered by the evidence accumulation process in the process of generating belief / disbelief / uncertainty / conflict masses. Potentiality is a mechanism to set the various match threshold values, where the thresholds define acceptable confidence levels for decision-making. Evidence is computed on the basis of partial matching of feature vector elements, where separate and distinct feature vectors are associated with both the given entity and each of the reference entities. Following evidence-combination methods, evidence is accrued for both the positive and negative decisions regarding a potential match.
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
## INTERNATIONAL SEARCH REPORT

### A. CLASSIFICATION OF SUBJECT MATTER

<table>
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<tr>
<th>INV.</th>
<th>G06N5/02</th>
<th>G06N5/04</th>
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According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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| A | US 6 056 690 A (ROBERTS LINDA M [US]) 2 May 2000 (2000-05-02) column 5, line 63 - column 7, line 56 | 1-34 |

Further documents are listed in the continuation of Box C.

See patent family annex.

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### Date of the actual completion of the international search

18 October 2006

### Date of mailing of the international search report

20/11/2006

Name and mailing address of the ISA/Authorized officer

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Valencia, Erika
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