



- (51) **International Patent Classification:**
G06F 19/10 (2011.01) *G06N 3/12* (2006.01)
- (21) **International Application Number:**
PCT/IB2015/057964
- (22) **International Filing Date:**
16 October 2015 (16.10.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2975/DEL/2014 18 October 2014 (18.10.2014) IN
- (72) **Inventors; and**
- (71) **Applicants :** MALIK, Girik [IN/IN]; RZ-112, Manas Kunj, Mangal Bazaar, Uttam Nagar, New Delhi 110059 (IN). DHAR, Pawan K. [IN/IN]; 301, Tower 10, Purvanchal Heights, Uttar Pradesh, Sector Zeta 1, Greater Noida, Greater Noida 201306 (IN).
- (74) **Agent:** RANA, Vikrant; S. S. Rana & Co., Advocates, Patent & Trademark Attorneys, 317, Lawyers' Chambers, High Court of Delhi, New Delhi 110003 (IN).

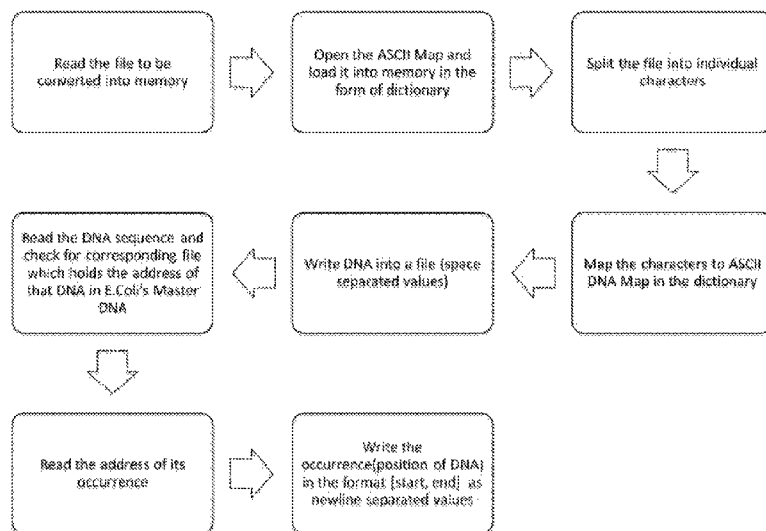
(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to the identity of the inventor (Rule 4.17(i))

[Continued on next page]

(54) **Title:** A BIOMOLECULE BASED DATA STORAGE SYSTEM

(57) **Abstract:** The present invention describes a biomolecule based storage system for converting, storing the data in DNA coded form and retrieving data using pointer file approach. User input data is converted into 4base DNA sequence, called Nibble, which is further mapped onto the DNA sequence of an organism. The first position of each converted nibble is then obtained and stored in a pointer file. By mapping the positions of pointer file onto the DNA sequence of the organism, the data can be retrieved.

Fig. 1: Process of conversion of Data to DNA and pointer



-
- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- Published:**
- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*