



- (51) International Patent Classification:
G06F 19/00 (2011.01)
- (21) International Application Number:
PCT/EP2013/061300
- (22) International Filing Date:
31 May 2013 (31.05.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/654,295 1 June 2012 (01.06.2012) US
- (71) Applicant: EUROPEAN MOLECULAR BIOLOGY
LABORATORY [DE/DE]; Meyerhofstr. 1, 69117 Heidel-
berg (DE).
- (72) Inventors: GOLDMAN, Nick; European Bioinformatics
Institute, Wellcome Trust Genome Campus, Hinxton, Cam-
bridge Cambridgeshire CB10 1SD (GB). BIRNEY, John;
European Bioinformatics Institute, Wellcome Trust Gen-
ome Campus, Hinxton, Cambridge Cambridgeshire CB10
1SD (GB).
- (74) Agent: 24IP LAW GROUP SONNENBERG FORT-
MANN; Patent- und Rechtsanwälte, Dr. Robert Harrison,
Herzogspitalstraße 10a, 80331 München (DE).

(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, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, 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, 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, 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).

Published:

— without international search report and to be republished
upon receipt of that report (Rule 48.2(g))

(54) Title: HIGH-CAPACITY STORAGE OF DIGITAL INFORMATION IN DNA

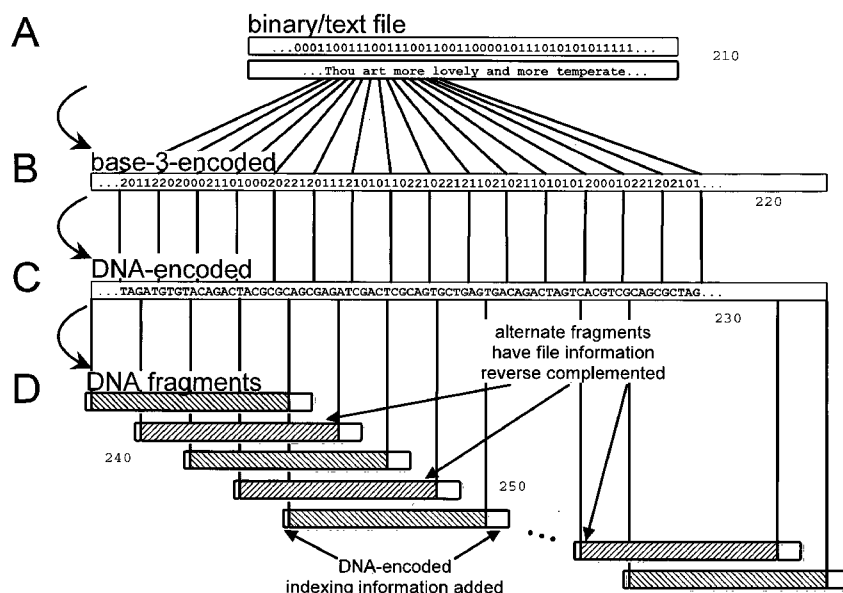


Figure 2

(57) Abstract: A method for storage of an item of information (210) is disclosed. The method comprises encoding bytes (720) in the item of information (210), and representing using a schema the encoded bytes by a DNA nucleotide to produce a DNA sequence (230). The DNA sequence (230) is broken into a plurality of overlapping DNA segments (240) and indexing information (250) added to the plurality of DNA segments. Finally, the plurality of DNA segments (240) is synthesized (790) and stored (795).