

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 July 2008 (17.07.2008)

PCT

(10) International Publication Number
WO 2008/086526 A3

(51) International Patent Classification:
A61C 5/08 (2006.01) A61C 5/10 (2006.01)

(74) Agent: BRUESS, Steven C , Merchant & Gould PC, P.O. Box 2903, Minneapolis, MN 55402-0903 (US).

(21) International Application Number:
PCT/US2008/050907

(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, BR, BW, BY, BZ, CA, CH, 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, KM, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

(22) International Filing Date: 11 January 2008 (11.01.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/879,905 11 January 2007 (11.01.2007) US

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

(71) Applicant (for all designated States except US):
GEODIGM CORPORATION [US/US], 1630 Lake Drive West, Chanhassen, MN 55317 (US).

(72) Inventors; and

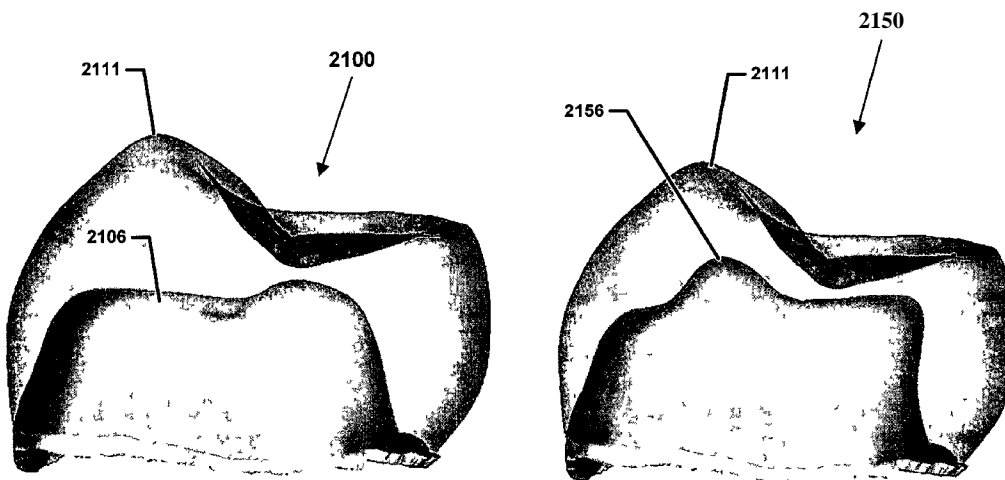
(75) Inventors/Applicants (for US only): MARSHALL, Michael Craig [US/US], 14689 Rosewood Place N.E., Prior Lake, MN 55372 (US). WALLENFELT, Brian Paul [US/US], 4570 Quinwood Lane North, Plymouth, MN 55442 (US). NGUYEN, Minh Xuan [VN/US], 1224 Gibbs Ave., Apt N-3, St. Paul, MN 55108 (US).

Published:

— with international search report

(88) Date of publication of the international search report:
16 October 2008

(54) Title: DESIGN OF DENTAL APPLIANCES



(57) Abstract: Electronic models of components of dental appliances can be generated based on the outer surface of an electronic model of the dental appliance. The outer surface may be generated based on the dentition and anatomy of the patient. For example, automated processes may identify landmarks in the anatomy and define the outer surface based on the identified landmarks. Alternatively, the outer surface may be generated based on statistical data. A management system coordinates automated processes with interactive processes to facilitate collaboration of remotely located technicians and equipment in generating electronic models.

WO 2008/086526 A3

INTERNATIONALSEARCH REPORT

International application No

PCT/US 08/50907

A CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61 C 5/08 (2008.04); A61 C 5/1 0 (2008 04) USPC - 433/2 18; 433/223; 29/896. 1 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) IPC(8) A61C 5/08 (2008 04), A61C 5/10 (2008 04) USPC 433/218, 433/223, 29/896 1 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8) A61C 15/00, 5/00, 11/00, B21F 43/00 (2008 01) USPC 433/216, 217, 213, 219, 220, 221, 222. 29/896 11 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubEAST(USPT,PGPB,EPAB,JPAB). GoogleScholar Search dental restorations, bridge, framework, crown, molding, coping pontic, electronic model, remote processor, computer user interface, display		
C DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 2006/0115795 A1 (MARSHALL et al) 1 June 2006 (01 06 2006) para[0002], para[0018], para[0045], para[0047], para[0048], para[0058], para[0064], para(0103)	1-20
A	US 2006/0122719 A1 (KOPELMAN et al) 8 June 2006 (08 06 2006) Abstract	1-20
<input type="checkbox"/> Further documents are listed in the continuation of Box C <input type="checkbox"/>		
* Special categories of cited documents "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 23 July 2008 (23 07 2008)		Date of mailing of the international search report 3 0 JUL 2003
Name and mailing address of the ISA/US Mail Stop PCT, Attn ISA/US, Commissioner for Patents P O Box 1450, Alexandria, Virginia 22313-1450 Facsimile No 571-273-3201		Authorized officer Lee W Young PCT Helpdesk 571-272-4300 PCTOSP 571-272-7774