

(51) International Patent Classification:
H02J 13/00 (2006.01)(21) International Application Number:
PCT/US2009/067938(22) International Filing Date:
14 December 2009 (14.12.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/201,856 15 December 2008 (15.12.2008) US
12/378,102 11 February 2009 (11.02.2009) US
12/378,091 11 February 2009 (11.02.2009) US(71) Applicant (for all designated States except US): **AC-CENTURE GLOBAL SERVICES GMBH** [CH/CH];
Geschäftshaus Herrenacker 15, CH-8200 Schaffhausen (CH).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **TAFT, Jeffrey, D.** [US/US]; 119 W. College. Apt.1, Canonsburg, PA 15317 (US).(74) Agent: **CAMPBELL, Randy, L.**; Brinks Hofer Gilson & Lione, 201 N. Illinois Street, Indianapolis, IN 46204 (US).

(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, 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, 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, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, 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: POWER GRID OUTAGE AND FAULT CONDITION MANAGEMENT

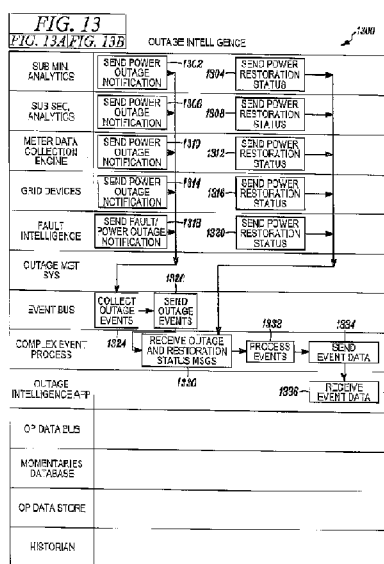


FIG. 13A

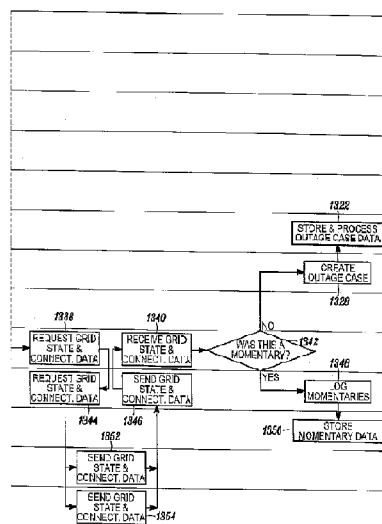


FIG. 13B

(57) Abstract: An outage intelligence application receives event messages indicative of occurrences associated with various devices within a power grid. The outage intelligence application determines a state of the various devices based on the event messages. Based on the event messages, the outage intelligence application can determine and confirm an outage condition associate with a particular device. A fault intelligence application receives synchrophasor data for each phase in a multi-phase power grid. The synchrophasor includes phasor magnitude and phasor angle information for each phased. Based on the synchrophasor data, the fault intelligence application determines the presence of a fault involving one or more of the phases and identifies a particular fault type.