

(43) International Publication Date
22 December 2011 (22.12.2011)(10) International Publication Number
WO 2011/159598 A1(51) International Patent Classification:
G01R 31/3185 (2006.01) **G01R 31/317** (2006.01)**Bradford** [US/US]; 7 Barry Road, Lambertville, NJ 08530 (US).(21) International Application Number:
PCT/US2011/040152

(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, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(22) International Filing Date:
13 June 2011 (13.06.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/818,707 18 June 2010 (18.06.2010) US(71) Applicants (for all designated States except US): **ALCATEL-LUCENT USA INC.** [US/US]; 600-700 Mountain Avenue, Murray Hill, NJ 07974-0636 (US). **ALCATEL LUCENT** [FR/FR]; 3, avenue Octave Greard, 75007 Paris (FR).

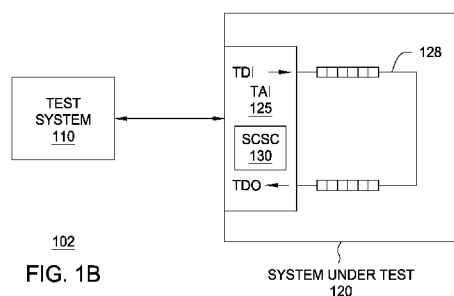
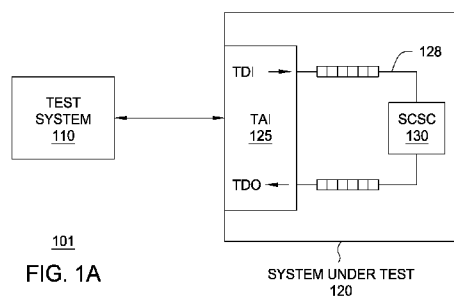
(72) Inventors; and

(75) Inventors/Applicants (for US only): **GOYAL, Suresh** [US/US]; 34 Sycamore Way, Warren, NJ 07059 (US). **PORTOLAN, Michele** [IE/IE]; 143 Westend Village, Blandshardstown, Dublin 15 (IE). **VAN TREUREN,**

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR PROVIDING SCAN CHAIN SECURITY



(57) Abstract: A scan chain security capability is provided herein. The scan chain security capability enables secure control over normal use of a scan chain of a system, e.g., for purposes such as testing prior to deployment or sale of the system, in-field testing after deployment or sale of the system, in-field modification of the system, and the like. The scan chain security capability enables secure control over normal use of a scan chain by enabling control over interruption of a scan chain and re-establishment of an interrupted scan chain. A scan chain security component is configured for removing an open-circuit condition from the scan chain in response to a control signal. The control signal may be generated in response to validation of a security key, in response to successful completion of a challenge-based authentication process, or in response to any other suitable validation or authentication. The scan chain security component also may be configured for creating an open-circuit condition in the scan chain in response to a second control signal. The second control signal may be a scan register value received via the scan chain.



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))