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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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(71) Applicant (for all designated States except US): **ARKA-DOS, INC.** [US/US]; 948 U.S. Highway 22, North Plainfield, NJ 07062 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LOGVINOV, Oleg** [US/US]; 27 Beacon Hill Road, East Brunswick, NJ 08816 (US). **WALVIS, Dick** [US/US]; 214 Calcita Drive, Santa Cruz, CA 95060 (US). **EBERT, Brion** [US/US]; 405 Canal Park, Easton, PA 18042 (US). **LAWRENCE, David** [US/US]; 59 Plumer Road, Newton, NJ 07860 (US).

(74) Agent: **ZONERAICH, Davy, E.**; Norris McLaughlin & Marcus, P.A., P.O. Box 1018, Somerville, NJ 08876-1018 (US).

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— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND SYSTEM FOR MAXIMIZING DATA THROUGHPUT RATE IN A POWER LINE COMMUNICATIONS SYSTEM BY MODIFYING PAYLOAD SYMBOL LENGTH

(57) Abstract: Data throughput rate in a power line communications ("PLC") system is controlled by generating PLC carrier signals in accordance with a PLC signal frame structure containing payload symbols where the payload symbol length is selected based on at least one of a PLC system channel quality and node configuration data. The selected payload symbol length determines the processing operations that a source PLC transceiver performs for generating PLC signals or that a destination PLC transceiver performs for extracting information content from received PLC signals. The payload symbol lengths can be selected to maximize the data throughput rate while maintaining compatibility with prior art PLC system protocols and standards that require a PLC signal frame structure and its payload portion to have fixed, predetermined lengths.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/25866

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01R 31/08
US CL : 370/229, 232, 252

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)
U.S. : 370/229, 232, 252

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,459,692 B1 (Ben-Micheal et al) 1 October 2002 (1.10.2002), column 3, lines 25-26 and 58-59.	1-21
Y	US 5,490,168 (Phillips et al.) 06 February 1996 (6.2.1996), see entire document	1-21
Y	US 4,715,045 (LEWIS et al.) 22 December 1987, col. 9, line 36; col. 20, lines 5-6.	1-21

☐

Further documents are listed in the continuation of Box C.

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See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family

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Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Cynthia L Davis

Telephone No. (703) 605-3900

INTERNATIONAL SEARCH REPORT

Continuation of Item 4 of the first sheet:

Title exceeds 17 words

NEW TITLE:

Method and System for Maximizing Data Throughput in a Power Line Communications System by Modifying Payload Length