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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 9/445, 9/45 — A1

(11) International Publication Number: **WO 99/48000**

(43) International Publication Date: 23 September 1999 (23.09.99)

(21) International Application Number: PCT/US98/16062

(22) International Filing Date: 28 July 1998 (28.07.98)

(30) Priority Data:
09/039,653 16 March 1998 (16.03.98) US

(71) Applicant: ACUITY IMAGING, LLC [US/US]; 9 Townsend West, Nashua, NH 03063 (US).

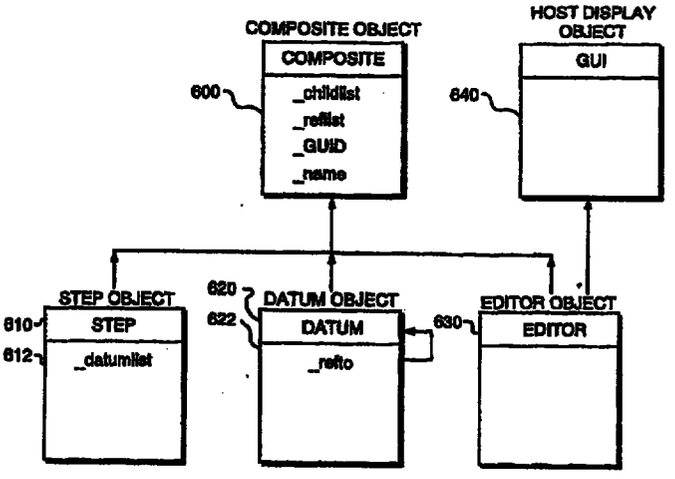
(72) Inventors: LIMONDIN, Serge; 33 Tarry Lane, Milford, NH 03055 (US). DZIEZANOWSKI, Joe; Wittemore Road, Salisbury, NH 03268 (US).

(74) Agents: BOURQUE, Daniel, J. et al.; Law Offices of Daniel J. Bourque, PA, Suite 303, 835 Hanover Street, Manchester, NH 03104 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: OBJECT ORIENTED METHOD OF STRUCTURING A SOFTWARE STEP PROGRAM



(57) Abstract

An object oriented method of structuring an executable software step program creates programs by composing a set of software objects or steps (200) self-organized into a hierarchical structure which provides the execution order, the connection of inputs (510) to outputs (234) at each step and between steps, and output data transformations. The step hierarchy also takes advantage of commonality between steps that perform similar operations. The method makes applications very easy to set up and run while ensuring that challenging applications can be provided and performed. Programs are built from a recipe database or directly using an easy to use point and click graphical user interface. The method also provides a mechanism for the step program to create the user interface components that allow the training and setting of parameters using the GUI (Graphical User Interface) (690) library native to the platform (computer or system) running the program. Thus, step programs, such as machine vision programs, can be run unchanged on different CPU architectures and take advantage of image processing acceleration hardware when available.