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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	BROWN ET AL.)	Examiner:
Serial No.:	08/454,736)	K. Presley
Filed:	05/30/95)	Art Unit: 3104
For:	MOTION CONTROL SYSTEMS)	

GROUP 310

97 JAN 22 11 31 53

PROCESSED

AMENDMENT

Assistant Commissioner for Patents
U.S. Patent & Trademark Office
Washington, D.C. 20231

23C
10-25-01
Presley

Sir:

This is in response to the Office Action (Paper No. 6) mailed October 2, 1996. It is believed that no fee or charge is due at this time to maintain the application in full force and effect. However, if any such fee or charge is due, please charge this to Deposit Account No. 08-3260.

In the prosecution of the above-identified application, please amend the application as follows:

IN THE DRAWING:

Please substitute drawing sheets 1 and 2 enclosed herewith for the originally filed sheets 1 and 2; changes made to the new drawing sheets are marked in red.

IN THE SPECIFICATION:

Page 7, line 23, please delete "with contain" and substitute therefor --with, or contain,--.

Page 22, line 4, please delete "extend" and substitute therefor --extended--.

Please delete reference numeral "34" at the following locations:

Page 7, line 22;

Page 17, line 27;

Page 19, lines 27 and 29 (two occurrences); and

Page 21, lines 10, 12, and 13.

Please delete reference numeral "34" and substitute therefor --32-- at the following locations:

Page 19, line 21; and

Page 58, line 32.

Please delete reference numeral "24" and substitute therefor --35-- at the following locations:

Page 22, lines 7, 18, and 25.

Please delete reference numeral "34" and substitute therefor --35-- at the following locations:

Page 21, lines 7, 8, and 11;

Page 22, lines 21 and 31;

Page 23, line 31;

Page 24, lines 3, 5, 10, 15, 17, 19, 20, 23, 30, and 33 (two occurrences);

Page 25, line 7;

Page 26, lines 7, 12, 16, 24, 25, and 27;

Page 27, lines 4, 9, 23, 26, and 30;

Page 28, lines 2, 5, 6, 19, and 25 (two occurrences);

Page 29, lines 15, 16, 26, 27, and 32;

Page 30, lines 1, 12, and 20;

Page 31, lines 4 and 15;

Page 32, lines 7 and 10;

Page 34, line 9;

Page 35, line 11;

Page 37, line 31 (two occurrences);

Page 38, lines 1, 2, 5, 15, and 17;

Page 39, lines 4, 13, and 22;

Page 40, line 32;
Page 41, lines 1 and 8;
Page 52, lines 27 and 29;
Page 54, lines 2, 3, 12, 15, 20, and 31;
Page 55, lines 11, 15, and 29;
Page 56, line 3;
Page 57, lines 9, 13, and 15;
Page 58, lines 10, 22, and 26;
Page 63, line 29;
Page 65, lines 7, 18, 19, and 29;
Page 67, lines 9, 11, and 16; and
Page 69, line 7.

Page 23, line 5, please delete "hardware" and substitute therefor --motion control system--;

Page 23, line 6, after "effort" please insert --by the hardware designer--;

Page 24, line 33, please delete "(Component)".

Page 31, line 20, please delete "in this manual" and substitute therefor --herein--;

Page 44, line 21, please delete "is" and substitute therefor --are--;

Page 54, line 24, after "component", please insert --35--;

Page 67, line 17, please delete "Component";

Page 69, line 4, please delete "38 (CPL)" and substitute therefor --(CPL) 38--;

Page 73, line 3, please delete "Component";

Page 74, lines 3 and 30, please delete "Component";

Page 75, line 19, please delete "Component";

Page 79, line 26, please delete "34" and substitute therefor --35.--; and

Page 82, line 28, please delete "you with".

IN THE CLAIMS:

Please amend the claims as follows:

1. (once amended) A method of moving an object in a desired manner, comprising the steps of:

2. defining a set of motion control operations, where each motion control operation is either a primitive operation that is necessary to perform motion control and that cannot be simulated using other motion control operations or a non-primitive operation that does not meet the definition of a primitive operation;

defining a core set of core driver functions, where each core driver function [is associated with] identifies one of the primitive operations;

defining an extended set of extended driver functions, where each extended driver function [is associated with] identifies one of the non-primitive operations;

defining a set of component functions;

providing component code for each of the component functions, where the component code [associates] cross-references at least some of the component functions with at least some of the driver functions;

developing a set of software drivers, where (i) each software driver [is associated with] is developed for a motion control device in a supported group of motion control devices and (ii) each software driver comprises driver code for implementing the motion control operations associated with at least some of the driver functions;

providing an application program comprising a series of component functions, where the application program defines the motion steps necessary to move the object in the desired manner;

selecting one motion control device from the group of supported motion control devices;

attaching the object to the selected motion control device;

selecting from the set of software drivers the software driver [associated with] developed for the selected motion control device;

generating control commands based on the component functions of the application program, the component code [associated with] of the component functions, and the driver code [associated with] of the selected software driver; and

operating the selected motion control device based on the control commands to move the object in the desired manner.

4. (once amended) A method as recited in claim 3, in which:

non-supported extended driver functions are extended driver functions having no driver code associated therewith; and

the step of generating control commands comprises the step of generating the control commands based on the driver code associated with a combination of the core driver functions to emulate the [plurality of incremental motion steps] motion control operations associated with at least some of the non-supported extended driver functions.

5. (once amended) A method as recited in claim 4, in which the step of generating the control commands further comprises the steps of:

developing an extended function pointer table that maps the non-supported extended driver functions to the combination of core driver functions employed to emulate the non-supported extended functions; and

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