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- (71) Applicant: RAYTHEON COMPANY [US/US]; 870 Winter Street, Waltham, Massachusetts 02451 (US).
- (72) Inventors: FEATHERSTON, Katherine; 10305 Stormhaven Way, Indianapolis, Indiana 46256 (US).
BROADHEAD, David J.; 206 East Hill Valley Drive, Indianapolis, Indiana 46227 (US).
- (72) Inventor: DEININGER, Gregory J. (deceased).
- (74) Agent: PLATT, Jonathan A.; 1621 Euclid Avenue, 19th Floor, Cleveland, Ohio 44115 (US).
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(54) Title: AIRCRAFT ARMAMENT SYSTEM CONTROL ELECTRONICS

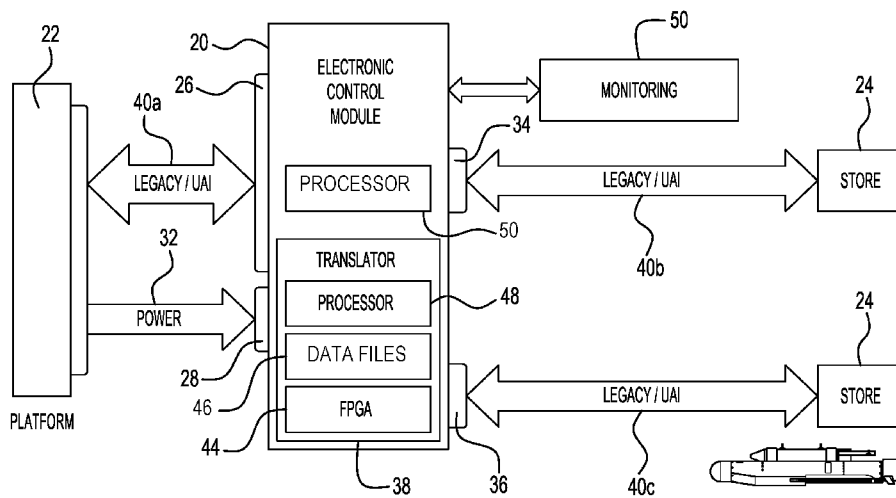


FIG. 1

(57) Abstract: A computer implemented method for integrating a platform, different stores, and/or carriage racks is implemented in an electronics control system that is communicatively coupleable to each of the platform, the different stores, and/or the carriage racks. The computer implemented method includes defining parameters for a plurality of predetermined electrical interfaces for predetermined platforms, stores, and carriage racks, and message sets corresponding thereto, identifying electrical interfaces of the platform, at least one store and/or at least one carriage rack based on the defined parameters, communicating different messages between the platform, the store and/or the carriage rack without affecting an Operational Flight Program (OFP) of the platform, with each communication between the platform, and the store and/or the carriage rack being independent, translating messages between the platform and the store and/or the carriage rack, and controlling operation of the carriage rack and/or the store based on the messages.



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.

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B. FIELDS SEARCHED
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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2010/070674 A1 (CAMPBELL EDWARD H [US]) 18 March 2010 (2010-03-18) paragraphs [0002], [0004], [0007] - [0012], [0026], [0028], [0030], [0031] - [0033], [0035], [0037], [0038], [0041] figures 3, 4, 7 -----	1-13, 15-20 14
X	EP 1 012 820 B1 (MCDONNELL DOUGLAS CORP A MARYL [US]) 12 August 2009 (2009-08-12) paragraphs [0004], [0014], [0024], [0027] - [0032], [0034], [0036], [0038], [0042], [0045], [0046] figures 1, 3 ----- -/--	1-6, 8-12, 14-20

Further documents are listed in the continuation of Box C.

See patent family annex.

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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Van Leeuwen, Erik

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 487 322 A (RHODES GLENN M [GB]) 30 January 1996 (1996-01-30) column 3, lines 60-62 figure 1 -----	20

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2010070674	A1	18-03-2010	EP 2334550 A2	22-06-2011
			US 2010070674 A1	18-03-2010
			WO 2010096090 A2	26-08-2010

EP 1012820	B1	12-08-2009	AU 733406 B2	10-05-2001
			EP 1012820 A1	28-06-2000
			ES 2331670 T3	12-01-2010
			US 5931874 A	03-08-1999
			WO 9855988 A1	10-12-1998

US 5487322	A	30-01-1996	DE 4042323 A1	04-07-1996
			ES 2110924 A6	16-02-1998
			US 5487322 A	30-01-1996
