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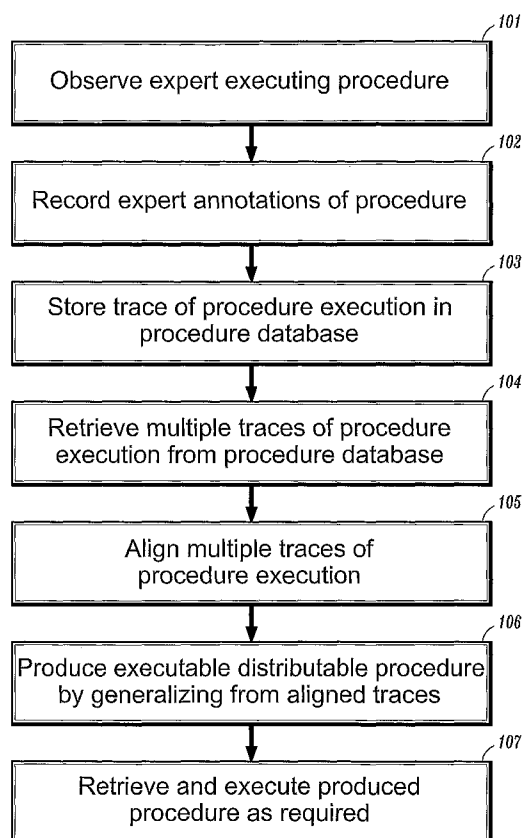
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[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR GENERATING AND DISTRIBUTING EXECUTABLE PROCEDURES FOR TECHNICAL DESK-SIDE SUPPORT



(57) Abstract: Systems and methods are provided for dynamically generating computer executable technical support procedures, as well as updating/augmenting such executable procedures, by tracking and processing sequences of actions (execution traces) that are taken by experts (or users) when performing a procedure or when executing an executable procedure. In one aspect, a method for generating and distributing a reusable executable procedure includes observing an expert executing a given procedure or task (step 101) (e.g., monitoring and recording a sequence of steps/actions (e.g., mouse clicks, keyboard actions, etc.) that are taken by an expert (or user) when manually performing a task/procedure on, e.g., a machine that is to be repaired or upgraded), and recording annotations (step 102) that may be made by the expert to explain why certain actions are taken or why certain decisions are made. The captured sequence of actions and recorded annotations are converted to an annotated execution trace that represents the execution of the procedure, which is stored in a procedure database (step 103). One or more corresponding/related procedure execution traces are retrieved from the procedure database (step 104) and then aligned (step 105) to identify/match corresponding/related steps/actions between the different procedure traces. The aligned traces are then generalized (step 106) to produce an executable procedure. The aligned traces are generalized by, e.g., identifying differences between corresponding steps of different traces, explaining them, and abstracting them into a logical description of the action to be performed at each step, to produce the executable procedure. The executable procedure can be subsequently retrieved and executed as required (step 107).



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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)

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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)
EAST (US-PGPUB, USPAT, USOCR, EPO, JPO, DERWENT, IBM_TDB).

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,134,644 A (MAYUZUMI et al.) 17 October 2000 (17.10.2000), FIG. 5, column 10, line 57 - column 11, line 15, FIG. 16, column 20, lines 27-60, column 21, lines 1-17, FIG. 20, column 26, lines 1-32, lines 57-65, column 27, lines 7-24.	1, 10, 20, 26, 30
X	US 6,260,035 B1 (HORVITZ et al.) 10 July 2001 (10.07.2001), FIG. 2, column 7, lines 29-67, FIG. 8, column 14, lines 60-67, column 15, lines 1-8, column 9, lines 18-32, column 10, lines 32-58, FIG. 23, column 23, lines 56-67, FIG. 7, column 12, line 58 - column 13, line 17, FIG. 6, column 12, lines 27-44, FIG. 12, column 18, lines 49-52, FIGs. 17-18, column 23, lines 20-60.	1-9, 26-29 -----
Y		10-25, 30-34
Y	US 6,384,843 B1 (HAREL), 7 May 2002 (07.05.2002), FIGs. 105-108, column 26, lines 46-65	10-19, 30-34



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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.
Y, P	US 6,615,240 B1 (SULLIVAN et al.), 2 September 2003 (02.09.2003), FIG. 1, column 4, line 56 - column 5, line 15, FIG. 4, column 10, lines 5-22, FIGs. 8-9, column 9, line 56 - column 10, line 5.	20-25