

US007210119B2

(12) United States Patent

Pothos et al.

(54) HANDLING UNSCHEDULED TASKS IN A SCHEDULING PROCESS

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- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 477 days.
- (21) Appl. No.: 10/239,087
- (22) PCT Filed: Mar. 1, 2001
- (86) PCT No.: **PCT/GB01/00874**

§ 371 (c)(1), (2), (4) Date: Sep. 19, 2002

(87) PCT Pub. No.: WO01/75701

PCT Pub. Date: Oct. 11, 2001

(65) **Prior Publication Data**

US 2003/0041087 A1 Feb. 27, 2003

(30) Foreign Application Priority Data

Mar. 31, 2000 (EP) 00302758

- (51) Int. Cl. *G06F 9/44* (2006.01) *G06F 9/46* (2006.01) *G05B 19/418* (2006.01)
- (52) U.S. Cl. 717/102; 718/102; 705/8
- (58) Field of Classification Search 717/101–106; 705/7–9; 718/100; 709/229; 708/102

See application file for complete search history.

(10) Patent No.: US 7,210,119 B2

(45) **Date of Patent:** Apr. 24, 2007

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,852,001 A	7/1989	Tsushima et al.	
5,408,663 A	4/1995	Miller	
5,615,121 A *	3/1997	Babayev et al	705/9

(Continued)

FOREIGN PATENT DOCUMENTS

WO WO 98/22897 5/1998

OTHER PUBLICATIONS

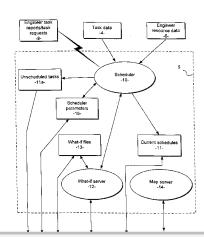
Parrott et al., "Comparing the WMS real time algorithm with AIP predictive schedulers", BT Technology Journal, vol. 13, No. 1, Jan. 1995, pp. 110-120.

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(57) ABSTRACT

Tasks (T) such as repair jobs on a telecommunications system, that are to be performed by a plurality of resources such as field engineers (E), at different locations in a geographical area (2), are scheduled by means of a scheduler (10) at a work manager server (5). The scheduler provides schedule data (11) corresponding to schedules of the tasks that individual ones of the resources are to carry out, from task data (4) concerning the tasks to be carried out and resource data (6) concerning characteristics of resources available to carry out the tasks over a given period. Not all the tasks are scheduled, resulting in unscheduled task data (11a). The schedule data (11) is downloaded to a workstation (7) together with the unscheduled task data. The downloaded data is analysed at the workstation to determine a candidate resource (E) to perform the task (T) corresponding to the unscheduled task data.

13 Claims, 18 Drawing Sheets

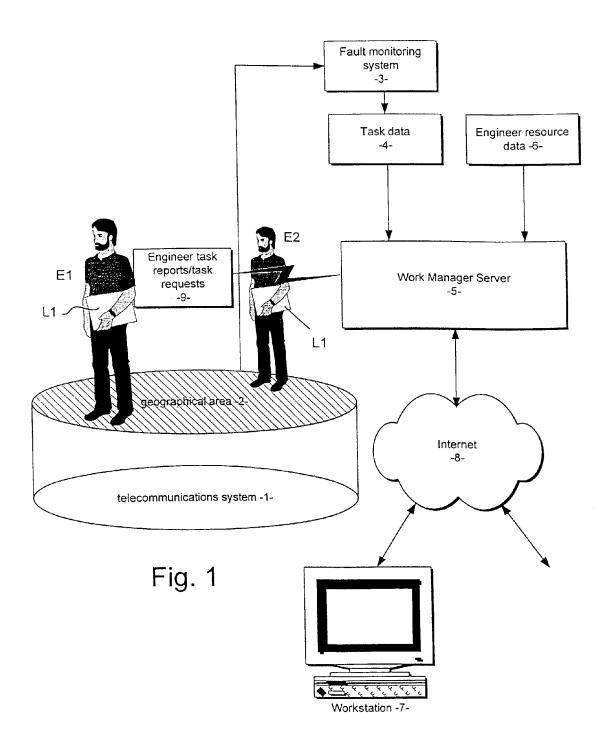


U.S. PATENT DOCUMENTS

5,826,236 A 10/1998 Narimatsu et al. 5,890,134 A 3/1999 Fox
 6,578,005
 B1 *
 6/2003
 Lesaint et al.
 705/8

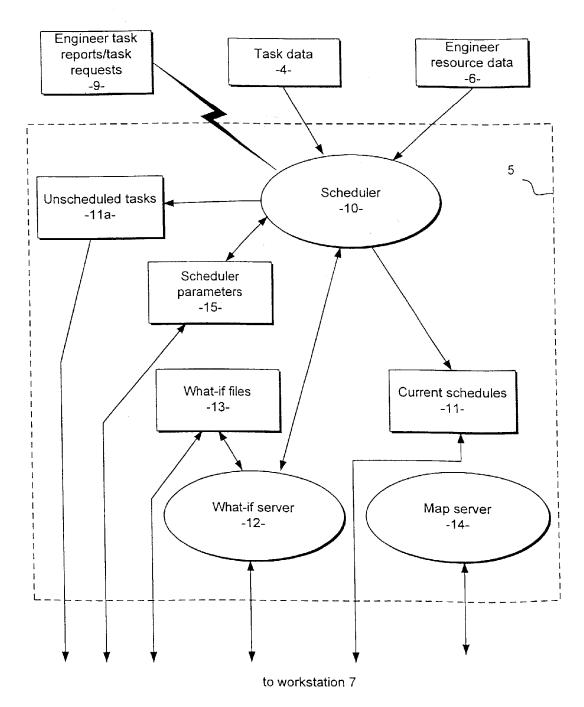
 2003/0229529
 A1 *
 12/2003
 Mui et al.
 705/8

* cited by examiner



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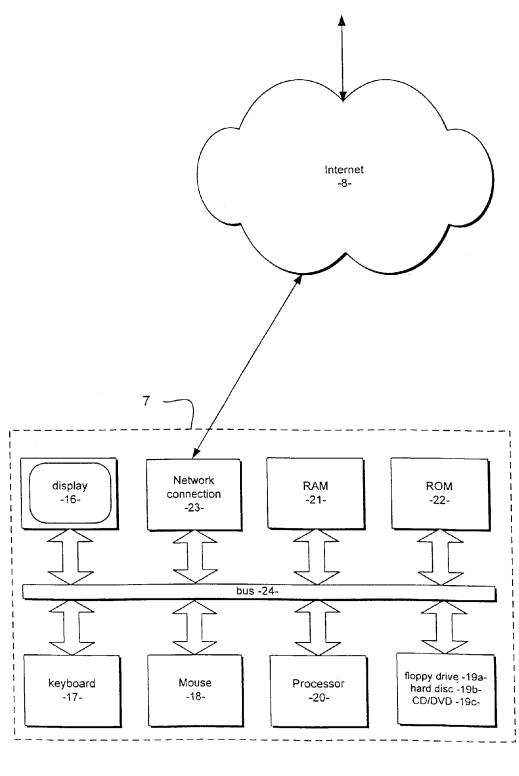


Fig. 3

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