Title (en)
METHOD AND APPARATUS FOR MOBILE ROBOT MOTION CONTROL

Title (de)
VERFAHREN UND VORRICHTUNG ZUR BEWEGUNGSSTEUERUNG EINES BEWEGLICHEN ROBOTERS

Title (fr)
PROCEDE ET APPAREIL DE COMMANDE DU MOUVEMENT D'UN ROBOT MOBILE

Publication
EP 0939882 A4 20010411 (EN)

Application
EP 97940826 A 19970905

Priority
• US 9715605 W 19970905
• US 2540696 P 19960906

Abstract (en)
[origin: WO9812498A1] A mobile robot base movable relative to a surface, comprising: at least two wheels privotably and rotatably mounted to the base, each wheel having a steering axis and a rotation axis; drive means for rotating the wheels along the surface; steering means for pivoting the wheels with respect to the surface; and controller means for controlling the motion of the base, wherein the controller means includes means for reading an input motion vector from a host processor, mapping the input vector to a desired axis motion vector for each of the axes, calculating a control envelope for each of the axes, determining whether the axis motion vector lies within the control envelope for each of the axes, calculating a modified axis motion vector when the axis motion vector does not lie within the control envelope, sending the axis motion vector or modified axis motion vector to an axis controller for each of the axes, estimating a motion of the base traveled during a discrete time interval DELTA t, calculating a position and an orientation of the base in a set of world coordinates, and repeating the previous steps continuously until commanded to stop.

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G01B 7/00; G05D 1/02

IPC 8 full level
G05D 1/02 (2006.01)

CPC (source: EP)
G05D 1/0272 (2024.01)

Citation (search report)
• [A] US 4747458 A 19880531 - ANDRE GUY [FR], et al
• [AP] US 5609216 A 19970311 - FISHER DAVID E [US], et al
• [AP] DE 19702383 A1 19970814 - HONDA MOTOR CO LTD [JP]
• See references of WO 9812498A1

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9812498 A1 19980326; AU 4251597 A 19980414; EP 0939882 A1 19990908; EP 0939882 A4 20010411

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