

Abstract Sheet (Bibliographical Entries)

The descriptors given are free terms. This abstract sheet may be reproduced without permission of charge.

Arkoumanis, D., Adamopoulos, Y., Xeros P.

Χωρικές Ερωτήσεις σε Εφαρμογές Κρίσιμου Χρόνου (Spatial Queries in Time-Critical Applications)

Tech. Chron. Sci. J. T.C.G., ΙΙΙ, Jan. - Dec. 2002, vol. 22, no 1-2, pp. 7-21, fig., 16 ref.

In Time-Critical applications such as the Air-Traffic Control, appear spatial queries, which are executed on constantly changing data collected from a variety of sources. An example query is "Find a blue aircraft at a distance less than 50Km than a red aircraft which in turn is at a distance less than 10Km from a gray aircraft and north of a blue island". This paper shows that the processing of such spatial configuration queries belongs to the Constraint Satisfaction Problem family and defines a spatial data structure for the organization of the positioning data stream of the relevant objects. A heuristic algorithm that takes advantage of the data structure is proposed and retrieves, as shown by experimental evaluation, almost optimal solutions in minimal time.

(Authors)

K-W:

In the present paper site and orbital diversity techniques are presented. These techniques constitute the most reliable solution for satellite communications in order to mitigate the impairments caused when radiowaves propagate through the atmosphere. Rain fades play the dominant role for satellite systems operating in heavy climatic regions at frequencies above 10GHz. Apart from the analytical description of the site and orbital diversity techniques, this paper also summarizes the most representative prediction models concerning these techniques and investigates their future prospects.

(Authors)

K-W:

Papadias, B.K., N.T.U.A., Dept. of Electric Energy, Electrical & Computer Eng.

Leonidaki, E.A.

Επίδραση των Ευέλικτων Συστημάτων Μεταφοράς Ηλεκτρικής Ενέργειας (FACTS) στη Λειτουργία των Συστημάτων Ηλεκτρικής Ενέργειας (Flexible AC Transmission Systems (FACTS) Effect on Power Systems Operation)

Tech. Chron. Sci. J. T.C.G., ΙΙΙ, Jan. - Dec. 2002, vol. 22, no 1-2, pp. 23-34, fig., tab., 32 ref.

In this paper the main Flexible AC Transmission Systems (FACTS) devices are presented. In detail, the basic operation and control principles of these devices are given and the way they contribute to power systems operation and control are discussed. In addition the main FACTS applications are presented

(Authors)

K-W:

Arapoglou, P. M., Panagopoulos, A. D.,

Cottis, P.G., N.T.U.A. Fac. of Electrical & Computer Eng., Div. of Information Systems and Materials Technology

Διαφορική Λήψη σε Συστήματα Δορυφορικών Επικοινωνιών (Diversity Reception in Satellite Communication Systems)

Tech. Chron. Sci. J. T.C.G., ΙΙΙ, Jan. - Dec. 2002, vol. 22, no 1-2, pp. 35-46, fig., 42 ref.