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Title: Static Coverage Path Planning for UAVs with Conical Field of View When Monitoring Rectangular Ground Areas

Author(s): Marica, V (Marica, Vlad); Curiac, CD (Curiac, Christian-Daniel); Quentel, PYM (Quentel, Paul Yves Marie); Stangaciu, CS (Stangaciu, Cristina-Sorina); Micea, MV (Micea, Mihai-Victor)

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Abstract: Finding a suitable UAV path to cover a given ground area is of paramount importance when accomplishing monitoring or mapping missions. In order to obtain an appropriate UAV route to inspect a rectangular ground area using a sensor with a conical field of view, this paper analysis three classic trajectories, namely scan, rectangular spiral and Hilbert paths. Using carefully chosen metrics we conclude that the scan path is the right solution to this static coverage planning problem.

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Addresses: [Marica, Vlad; Quentel, Paul Yves Marie; Stangaciu, Cristina-Sorina; Micea, Mihai-Victor] Politehn Univ, Comp & Informat Technol Dept, Timisoara, Romania.

[Curiac, Christian-Daniel] Tech Univ Munich, Dept Elect & Comp Engr, Munich, Germany.

Corresponding Address: Marica, V (corresponding author), Politehn Univ, Comp & Informat Technol Dept, Timisoara, Romania.

E-mail Addresses: vlad.marica@student.upt.ro; clulstian.curiac@tum.de; paulyves.quentel@student.upt.ro; cristina.stangaclu@cs.upt.ro; mihai.micea@cs.upt.ro

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