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Architectural solutions of conformal network-centric staring-sensor systems with spherical field of view

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The article presents the concept of network-centric conformal electro-optical systems construction with spherical field of view. It discusses abstract passive distributed electro-optical systems with focal array detectors based on a group of moving objects distributed in space. The system performs conformal processing of information from sensor matrix in a single event coordinate-time field. Unequivocally the construction of the systems which satisfy the different criteria of optimality is very complicated and requires special approaches to their development and design. The paper briefly touches upon key questions (in the authors' opinion) in the synthesis of such systems that meet different criteria of optimality. The synthesis of such systems is discussed by authors with the systematic and synergy approaches.

Keywords: EOS, network-centric systems, architecture, wide angle optical systems, MWIR.

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