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A multi-objective approach towards geospatial facility location

Geospatial facility location science places a strong emphasis on geographical and spatial factors influencing site suitability for networks of facilities with complex location requirements, such as radars, telecommunication towers, watchtowers and wind turbines. Traditional placement procedures are designed to accommodate one type of facility only according to one placement objective, and are typically highly problem-specific. A generic geospatial facility location framework for identifying facility location trade-off alternatives was designed and was implemented as a computerised decision support system. The system also contains a novel, highly effective, multi-objective facility placement optimisation algorithm inspired by the aggressive manner in which viruses spread in mammals.

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