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Software for analyzing and planning FSO technology deployment

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Description –The program SIMFSO (Simulation of Free-space Optics) is designed to simulate the basic properties of a general wireless optical link. The program allows you to enter the location of FSO terminals using coordinates or directly on the map. It is connected to online Google map data and allows the use of offline data from the OpenStreetMap project.

Types of analyses:

- Link power budget for a given location, beam parameters, and transmitter power.
- Calculation of the effect of turbulent atmosphere on beam power and geometry.
- Calculation of the effect of precipitation, especially fog, on the power balance of the link. Long-term statistics are available from more than 200 locations in the Czech Republic, Germany, France and Italy to estimate the long-term availability of FSO links.
- Analysis of the possibility of reception of scattered radiation outside the transmitted beam.
- A module for checking the location of FSO units from the point of view of the possible entry of the Sun into the field of view of the receiver, which usually leads to its destruction.
- Work safety analysis according to ČSN EN 60825-1 a ČSN EN 60825-12.

The program is available here as Freeware.