Geodesic or Geodesic Line (glossary)

geodesic or geodesic line

> *A curve on a surface with a zero-length tangential curvature vector.*

Notes to Entry:

1. A geodesic's curvature vector is perpendicular to the surface, thus has the minimum curvature of any curve restricted to the surface. This is often defined as a minimal distance curve between two points, but this does not always suffice, since some points (especially on ellipsoids and spheres) are often joined by more than one geodesic. For example, on an ellipsoid the points with (φ, λ) = (0, 0) and (0, 180) are joined by four separate geodesic [2 polar (the shorter) and 2 equatorial]. The exponential map is only guaranteed to be one-to-one for a small area (depending on where the center is and how the surface is curved).
2. Geodesic and geodesic line are registered with the ISO as two separate terms, but in practice are frequently used synonymously.

Source

ISO TC211. "Geodesic." In: *ISO TC211 Multilingual Glossary.* Version from 2020-06-02. Concept ID: 2055. Available at: https://isotc211.geolexica.org/concepts/2055/.

Discussion

None.

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