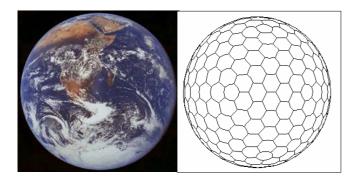
## Towards Interoperability of Global Geospatial Data Sets: Geodesic Discrete Global Grids

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A hierarchical partitioning scheme for a geodesic discrete global hexagonal grid

**The Vision:** to use the same data partitioning scheme for all global data sets.

## Why?

1. To facilitate local comparisons between different data sets.

2. To speed up global computations between data sets.

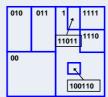
An example: given an avian flu pandemic, is there a relationship between global disease distribution and global winds?

## Why hexagons?

1. [Almost] the same shape and size all over the sphere (compare lat/long grid).

2. Better mathematical properties for modeling of dynamic processes e.g. weather patterns

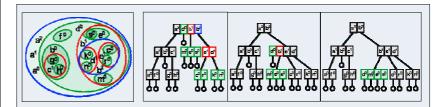
Research supported in part by the National Science Foundation







Peano codes for partition cell encoding. A representation allowing a hierarchical index of *nested* cells. .



Hierarchical spatial partitioning achieved through the BV-tree: a solution of the ndimensional B-tree problem.