DBRP

CFT surface / Boundary of AdS state
"Bulk"

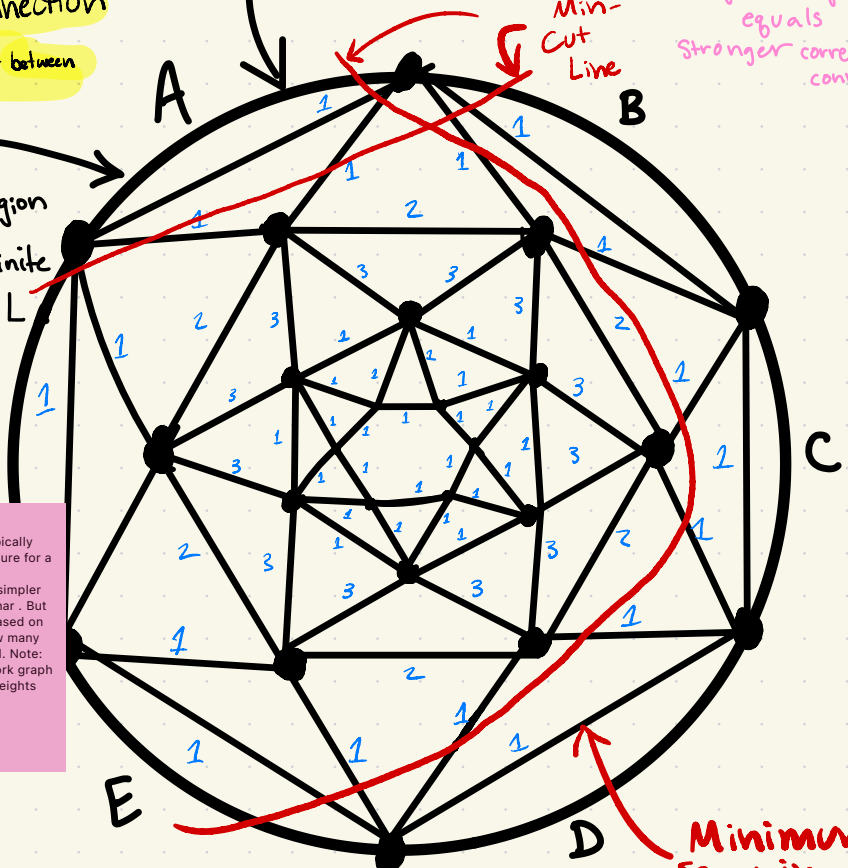
Edge Weights = geodesic length
"which is"
Proportional to entanglement entropy of a region.
which is equal to entanglement strength.
i.e. higher weight equals stronger correlation / connectivity

Larger weights
= Stronger Connection
= more entanglement between sub regions

Graph model

Let N denote subregion of boundary L.
Where N can be infinite
$(N_1 + N_2 + \ldots + N) = L$
deeper in bulk

The more subregions you have, the deeper you bring boundary in bulk



Note about graph type: Typically choose a specific graph structure for a specific problem
i.e. diamond work graph for simpler problems, circular graph, planar . But can also create own graph based on problem constraints. i.e. how many subregions, or nodes needed. Note: Graph I created is diamond-work graph in sense of edges but not weights

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Ex.

$S(A) = 6$ ← Entropy of Subregion A with rest of boundary

where S = entropy

$S(BD) = 10$

where BD = B ∪ D
union

Minimum Spanning graph / discrete bulk
= min-cut graph = minimal surface
= minimum edge weight = Ryu-Takanagi formula (RT-formula)

Note:
With this value completes the holographic dictionary

What gives us bulk geometry

Entropy of a region is the sum of weight of edges in minimum cut that separate that region from the rest of the graph

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