digital_update_model_summary

Digital Update Model Summary

- 1. Decoherence as the Engine:

- Decoherence triggers discrete state updates (or "ticks") in the cosmos.

- Each tick occurs every ~0.6 ps, corresponding to an update frequency of roughly 1.7 THz.

- At each tick, potential quantum states collapse into a definitive state.

- 2. Emergence of Space Expansion:

- The universe is conceived as a network of nodes, each representing a digital state.

- These discrete updates cause the nodes to move apart, driving the expansion of space.

- A macroscopic cosmic scale (e.g., a 4-billion□lightyear ring or 1223 megaparsecs) is used for calibration.

- No ad hoc adjustments or fine-tuning are needed□the expansion naturally follows from the digital update process.

- 3. Time as an Emergent Property:

- Time is not an independent, continuous entity but emerges as the ordered sequence of these discrete state updates.

- The "flow" of time is simply the record of these sequential updates.

- 4. Fractal Dimensions and Digital Geometry:

- The update process gives rise to emergent fractal characteristics□a 0.8D fractal structure that, when combined with extra geometric effects, leads to an overall 2.7D effective dimension.

- The predicted sevenfold spiral geometry is one example of a structure that emerges from these discrete rotations and updates.

- Notably, the ratio of the golden angle (~137.5□) to the 7-fold increment (~51.43□) yields approximately 2.7, an intriguing numerical link.

- 5. Black Holes as Cosmic Reset Nodes:

- Black holes emerge when an overextended expansion snaps back.

- In this picture, black holes are not just endpoints but act as condensed nodes□a resetting mechanism that spawns a new cosmic beginning.

- This □snap back□ is a natural consequence of extreme local conditions in the ongoing digital update process.

- 6. Reinterpreting Quantum Phenomena:

- Feynman diagrams are effective because they sum over all the discrete update paths in interactions.

- The double-slit experiment□s interference patterns arise naturally from the coherent sum over these discrete propagation events.

- Both cases reflect the digital, quantized behavior underpinning what we observe as continuous phenomena.

- 7. A Unified Picture from First Principles:

- Starting with only a few observed and fixed parameters (like the cosmic ring calibration), all aspects of the model□from the 1.7 THz update frequency to the emergent fractal dimensions and space-time behavior□follow automatically.

- There□s no need for arbitrary adjustments; every calculation stems from the initial digital update framework.

- This elegant self-consistency offers new insights into longstanding puzzles from the origin of time to the nature of dark energy and black holes.

In essence, the model suggests that the universe□s structure, at both the quantum scale and cosmic scale, is governed by a simple digital update mechanism driven by decoherence. The interplay of these discrete ticks creates the patterns of space expansion, the emergence of time, and even the formation of black holes as new nodes□a truly unified and elegant vision of nature.