**Quantum Entanglement of Quarks as the Basis for Gravity**

**1. Introduction** The aim of this specification document is to propose a novel theoretical framework that replaces the classical concept of gravity with a quantum entanglement of quarks. In this model, quarks become entangled, exhibiting matter-antimatter circuits, leading to a new understanding of gravitational interactions. This proposal explores the entanglement of quarks as the fundamental mechanism underlying gravity.

**2. Quantum Entanglement of Quarks** 2.1 Quark Entanglement In this model, quarks, which are elementary particles that make up protons and neutrons, exhibit a unique property of quantum entanglement. Quarks within the same particle can become entangled, forming matter-antimatter pairs.

2.2 Matter-Antimatter Circuits The entangled quarks exhibit properties akin to matter and antimatter circuits. This entanglement results in pairs of quarks with opposite charges, effectively creating a balanced electrical charge within particles, which is crucial for the understanding of gravity.

**3. Gravitational Interaction** 3.1 Newtonian Gravity The classical concept of gravity, as described by Newton's law of universal gravitation (F = G \* (m1 \* m2) / r^2), remains the same. However, the interpretation of m1 and m2 is different within this framework.

3.2 Mass Interpretation In this model, m1 and m2 represent the sum of positive mass quarks and negative antimatter quarks, respectively, within the interacting particles. This interpretation preserves the mass-based nature of gravitational attraction.

3.3 Potential Energy The gravitational potential energy between two objects, which was classically expressed as -G \* (m1 \* m2) / r, remains applicable, with m1 and m2 representing the entangled quark combinations within the objects.

**4. Proportional to Mass** The proposed gravitational mechanism remains proportional to the mass of objects, ensuring that massive objects experience a stronger gravitational force due to a greater accumulation of entangled quarks.

**5. Locally and Globally** 5.1 Local Entanglement Quark entanglement occurs locally within each particle. It is the local entanglement that gives rise to the balanced electrical charge of particles, ensuring stability.

5.2 Global Entanglement The effects of this quark entanglement are not limited to the local scale. Instead, the entanglement extends globally, allowing for gravitational interactions over long distances. The summation of quark entanglement within particles contributes to the global gravitational field.

**6. Conclusion** This specification document proposes a theoretical framework in which gravity is understood as a result of the quantum entanglement of quarks, giving rise to matter-antimatter circuits and balanced electrical charges within particles. The gravitational interaction, as described by the classical Newtonian formula, remains proportional to mass, with the reinterpretation of mass in terms of entangled quarks. This model aims to expand our understanding of the fundamental forces in the universe. Further research and experimentation are required to validate and refine this novel approach to gravity.