Terra Lantern

The Source, the origin of all things. The Source created Elysium, the perfect world. But life did not take hold, this world was void of existence. Realizing that perfection is nothing, the Source split off its perfect world, into seven imperfect worlds. To balance the seven worlds the Source created the Fulcrum, an entity that bridges the seven worlds together, and the Arbiters, to guard the gateway into the Fulcrum.

They are seven Arbiters, one for each world. Each Arbiter carries with them a Regalia, the lock to gateway of the Fulcrum. The Regalia also serves as a tool that the Arbiter can use to defend himself. Opening the gateway to the other worlds can also bring fourth the essence of that world.

The Arbiter of Earth's Regalia is the Terra Lantern. The Arbiter carries with him four sets of keys, each unlocking a different bridge to the other worlds. To unlock the gateway to the other worlds, the Arbiter inserts a key into the lantern. From the Lanterns light, a portal opens.

1. Communication with the MAGE 2.0 system.
    a. The Lantern must communicate to the Player Interface Unit (PIU) via Bluetooth.
    b. Must support MIRP 2.0, MAGE's IR communication protocol for IR transmission.
2. The Lantern – the lock
    a. The Lantern must have a lock in which the player inserts keys into.
    b. It must be able to distinguish between the four sets of keys.
    c. The Lantern after relocking must be locked for as long is it was unlocked.
    d. Due to the instability of the portals, it can only remain unlocked for at most a minute.
3. The Keys – they are four keys total, each key opens a gateway to a different world. Some worlds require 2 keys to unlock. World connections are shown in **Figure 1**.
    a. Keys must snugly fit in lock, such that leaving the key in the lock doesn't drop the key.
    b. Sky Key – opens the gateway to the World of Wind. Healing wind spell, spell strength 100, cast every 3 seconds in 360° direction. (see documentation on spell types)
    c. Aqua Key – opens the gateway to the World of Water. Damage water spell, spell strength 100, cast every 7.5 seconds in 90° cone in front.
    d. Flame Key – opens the gateway to the World of Fire. Damage fire spell, spell strength 150, cast every second in 360° direction.
    e. Arc Key – opens the gateway to the World of Lightning. Damage Lightning spell, spell strength 20, cast every 0.5 second in a random 90° cone in front, left or right side.
    f. Sky Key & Aqua Key – opens the gate way to the World of Ice. Stun ice spell, spell strength 100, cast every 5 seconds in 270° cone in front.
    g. Flame Key & Arc Key – opens the gateway to the World of Plasma. Damage normal spell, spell strength 100, cast every second in 90° cone alternating between the left and right sides.

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        (Wind)          (Fire)
        /     \        /      \
    (Ice)        (Earth)       (Plasma)
        \     /        \      /
        (Water)       (Lightning)
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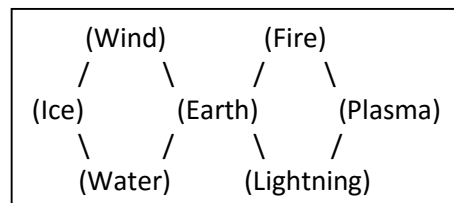
Figure 1: Diagram of the 7 worlds and the Fulcrum

4. Visual and Audio Indicator
    a. Must provide visual feedback during unlock and lock phase of each world. With each world having a different visual feedback.
    b. Similarly must provide audio feedback during unlock and lock phase of each world. With each world having a different audio feedback.
5. Power
    a. The Lantern must have an internal battery capable of powering the device for at least 2 hours.
    b. It must have an easy access for recharging and/or battery replacement.
6. Physical Construction
    a. The lantern must be portable enough to be carried in one hand.
    b. Lantern must look like a lantern, Keys must look like keys.
7. Communications
    a. Per MAGE 2.0 Bluetooth specifications, it should:
        i. Follow packet IR framing techniques accepted by the PIU (Player Interface Unit)
        ii. IR range must be in between 15 - 20 feet
        iii. Display a pair color when pairing with the PIU
        iv. Send notification to the PIU when the weapon is firing
        v. Accept game status updates from the PIU and update Audio and Visual indicators when the player has been hurt.
    b. Use any other method you see fit to communicate between the keys and lock