



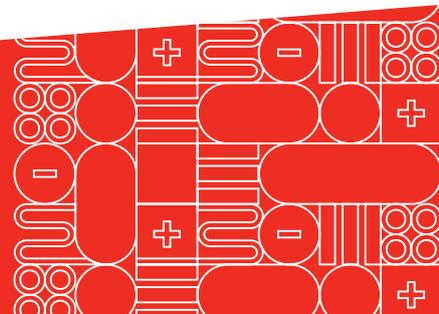
eliko

Case Study: How Eliko's tracking system made the immersive world of Cosmic Camp possible

Background

CAMP, The Family Experience Company recently launched, Cosmic CAMP, its first fully immersive digital play zone that combines digital technology in a physical space that takes families on an out-of-this-world adventure. Cosmic CAMP occupies 8,000 square feet of space and utilizes augmented reality and projection-mapping technology. The experience was designed in conjunction with Future Colossal which specializes in developing immersive spaces using Eliko's RTLS.*

* Cosmic CAMP website:
<https://camp.com/cosmic-camp>





CHALLENGE

When Future Colossal began designing this new unprecedented interactive experience, they realised they had to know how to locate players in real-time to produce a captivating journey. Virtually every planned adventure requires precise position data so that players can interact with various digital objects projected in physical space. Furthermore, Cosmic Camp can have up to 200 visitors at once. Therefore, it was a major technological challenge to also capture the location data of that many interactions accurately and reliably.

Sufficient accuracy and low latency are required to create an immersive experience. Some examples of this include:

- It is critical that players can "collect" projected digital coins from floors and walls without delay.

- The **real-time location system (RTLS)** must detect the tag where coins (the size of ca 16 inches or 40 cm) are projected for that two-way interaction to occur.
- The system must also recognize the tag at the precise location to automatically add points to the scoreboard when a player gets a coin.

However, when Future Colossal started looking for solutions, they soon learned that almost nobody offered the positioning capabilities needed. That is because most indoor tracking systems need a free view to function and are sensitive to disturbances. Additionally, standard systems can only provide a measurement accuracy of 6.5 to 49 feet (2 to 15 meters), which is why they can't precisely track smaller objects leaving most indoor tracking systems inadequate for advanced applications. This is where Eliko was aptly situated to help.

SOLUTION

By contrast, Eliko's real-time location system uses ultra-wideband technology that lets its signals move through obstructions and follow objects with a tracking accuracy of 30 cm. The system derives the position of targets by using a combination of anchors and tags; anchors communicate with tags that you put on the items you want to track. The data from the anchor flows to a server that in turn calculates the object's position in real-time.

Besides its ultra-wideband-based real-time location solutions, Eliko also takes care of all other aspects of the positioning network—planning, installation, support, and system verification. Moreover, Eliko offers a continuous network monitoring service ensuring high uptime.

TECHNICAL SPECIFICATIONS

- 15 anchors
- 200 tags
- 8,000 sq. feet tracking area
- 4 Hz update rate

"Eliko were a pleasure to work with. They were proactively supportive and always conscious of our needs. Their responsiveness despite the time zone difference of their headquarters made a huge difference in our ability to painlessly implement their technology. Their product is exceptional, but their commitment to supporting our work was what really allowed our experiences to shine."

– Domenic Portera, Creative Technologist,
Future Colossal



RESULTS

Together with augmented reality and projection mapping technology developed with Future Colossal, Eliko's real-time location systems were crucial in the creation of Cosmic Camp. The product is an 8,000 square-foot arena offering many immersive experiences, including:

- **Deep Space.** Players collect coins by throwing asteroids into black holes.
- **Remote Rovers.** By remotely controlling rovers in an alien landscape, players can collect coins from the Space Station's command centre.
- **The Ice Cave.** Here players will find brain games and visual wonder.
- **The Floor Is Lava.** This 360-degree space, featuring projection-mapped lava pools and physical obstacles, dares players to cross fields without touching the virtual lava.
- **Lunar Lasso.** Players can collect coins by saving the earth from asteroids in a infinity-mirror-esque environment.

INDUSTRY

Entertainment

ORGANISATIONS

CAMP NYC, Inc

Future Colossal

LOCATION

New York, US

KEY CHALLENGE

Enable players to interact with various digital objects projected in physical space

SOLUTION

Eliko UWB RTLS



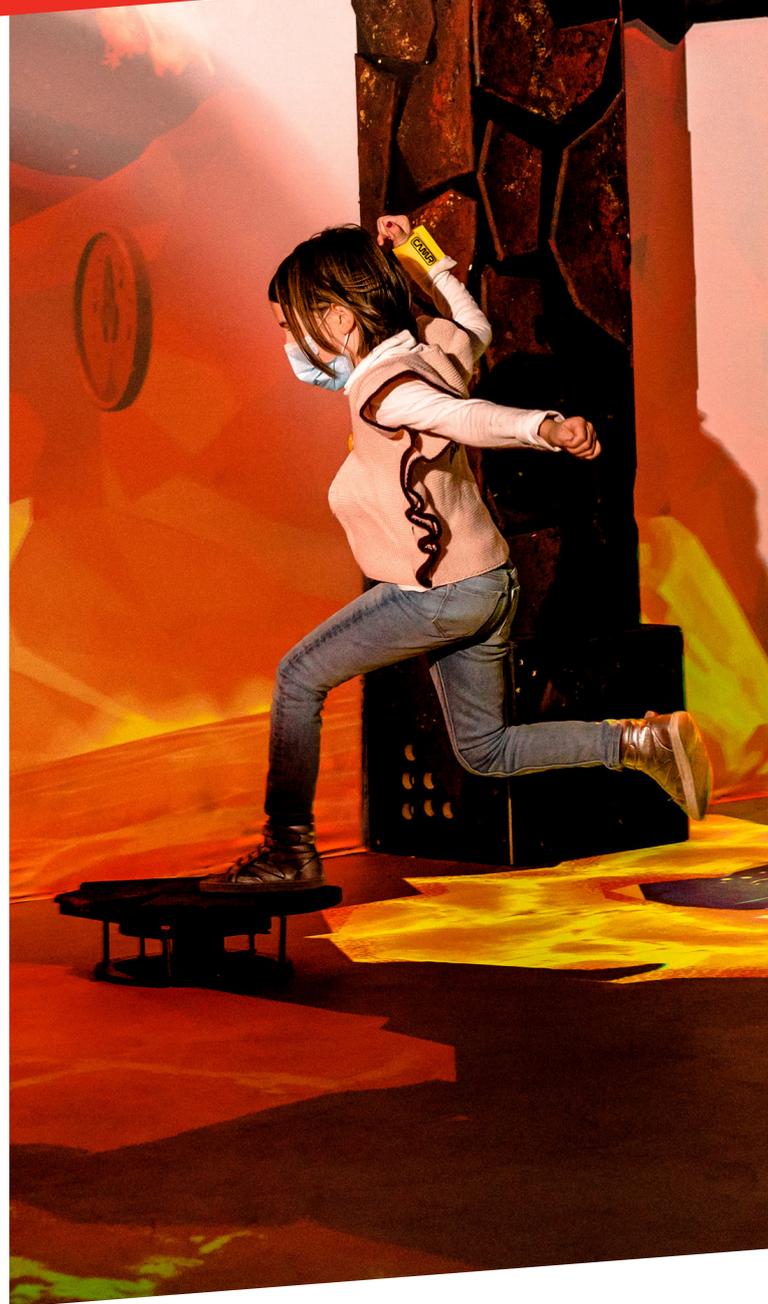


RESULTS

- Up to **200 participants** can play and interact with digital objects projected in the physical world.
- The interaction between the digital and the physical enables an **fully immersive experience**.
- Cosmic Camp visitors can enjoy an **interactive adventure together**.

"Future Colossal built custom software that directly interfaced with Eliko's RTLS system using their API. This gave our developers the ability to obtain each of the trackers real world positions as well as battery life. Each tracker is associated to a player and a player score. Through a check in/check out process, Eliko trackers embedded in the player's "cosmic communication device" allow users to explore the many different planets in the cosmic camp experience, collect digital coins by standing or touching them and collect points by playing the many games in the space. Monitoring battery life in realtime allowed the team to ensure each tracker was always fully charged before being put back in circulation, this along with the robust Eliko system allowed Camp to host up to 200 players at a time."

– Alessandro Lolli,
Technology Director



European Union
European Regional
Development Fund



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About Eliko

Eliko provides precise and reliable real-time location services that employ UWB networks. Eliko's mission is to bring game-changing tracking networks to industrial organisations for higher visibility, security and productivity. However, we are also keen to empower other innovators on their journey to develop mission-critical digital solutions in other industries, such as entertainment. Eliko's UWB networks are highly flexible and scalable in order to suit multiple indoor location opportunities and address new relevant use scenarios. In addition to EMPAC in New York, our customers include Le Puy du Fou Theme Park in France, Dimension Data and others.

Contact us at sales@kiortls.com to discuss your tracking needs.