

TRACK & FIELD APPLICATION: FREQUENTLY ASKED QUESTIONS

1. WHAT IS ISOLYNX?

IsoLynx is a high-precision athlete tracking system that can establish the location of an athlete, coach, official, etc. in a stadium or sports venue, and do so in real-time (instantaneously and continuously).

Building on the starting point of “location” the system can generate data about velocity, acceleration, and distance traveled. In addition, data can be replayed to illustrate key moments in races and how certain racing tactics affected the ultimate result.



2. HOW ACCURATELY CAN ISOLYNX ESTABLISH AN ATHLETE'S LOCATION?

The ID tags that report the athlete's location have a precision of $\pm 6"$ (15cm).

3. HOW OFTEN IS AN ATHLETE'S LOCATION UPDATED?

The ID tags have programmable update frequencies and can provide location information up to 200 times a second. The system can process information from up to 100 athletes simultaneously.

4. HOW DOES IT WORK?

The athlete is identified with a small tag, about the ‘footprint’ of a US quarter and weighing less than $\frac{1}{2}$ ounce. The tag emits a unique radio signal in the 6.5GHz range. This signal is picked up by a network of receivers installed around the perimeter of the stadium.

By analyzing, decoding, and processing the signal, with the help of some elegant computer engineering solutions, IsoLynx can calculate the exact location of every tag – in **real time**.



5. HOW MANY CAMERAS DOES IT NEED TO WORK?

None. The athlete's position is established by radio-telemetry, not by video geometry.

6. WHAT ARE THE CAMERAS YOU SHOW IN THE DIAGRAMS?

IsoLynx has the ability to use the ID tag position information to target individual robotic cameras on an athlete, group of athletes, or situation of interest. The system can control up to 128 separate cameras without any loss of bandwidth, or reduction in system stability.

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7. WHAT INFRASTRUCTURE IS NEEDED IN A STADIUM?

It depends to a certain extent on the size of the venue. An outdoor track stadium will have 8-10 IsoLynx receivers mounted about 14'-20' high around the perimeter of the stadium. An indoor arena will have 6-8 receivers.



The receivers are linked by one shielded Ethernet cable back to a central command location and connected to an IsoLynx decoder. This is connected to a computer. If robotic cameras are being used, each camera is connected to the command position by two cables; one for camera tracking commands, and one for video download.

8. HOW MUCH DOES IT COST?

The price depends on the complexity of the system installed, and the unique infrastructure requirements of a specific venue. Please talk with us directly about an installation at your facility.

9. WHEN CAN I GET IT?

We are currently in discussions with installers across the nation. Systems will be available for installation in late-spring 2011.

10. IS IT INSTALLED ANYWHERE WHERE I CAN SEE IT?

There are systems installed at venues in Massachusetts and Texas. It will be in use at the NCAA National Championships in Indoor Track in 2011. Please contact us for details.

