MERIT
2006 FAIR

Intelligent Servosystems Laboratory
ISL

Robot Interaction Using Cricket, an Indoor Positioning System

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Collaborator: **Joshua Lioi**

Robot Interaction Using Cricket, an Indoor Positioning System

- What is Cricket?

Robot Interaction Using Cricket, an Indoor Positioning System

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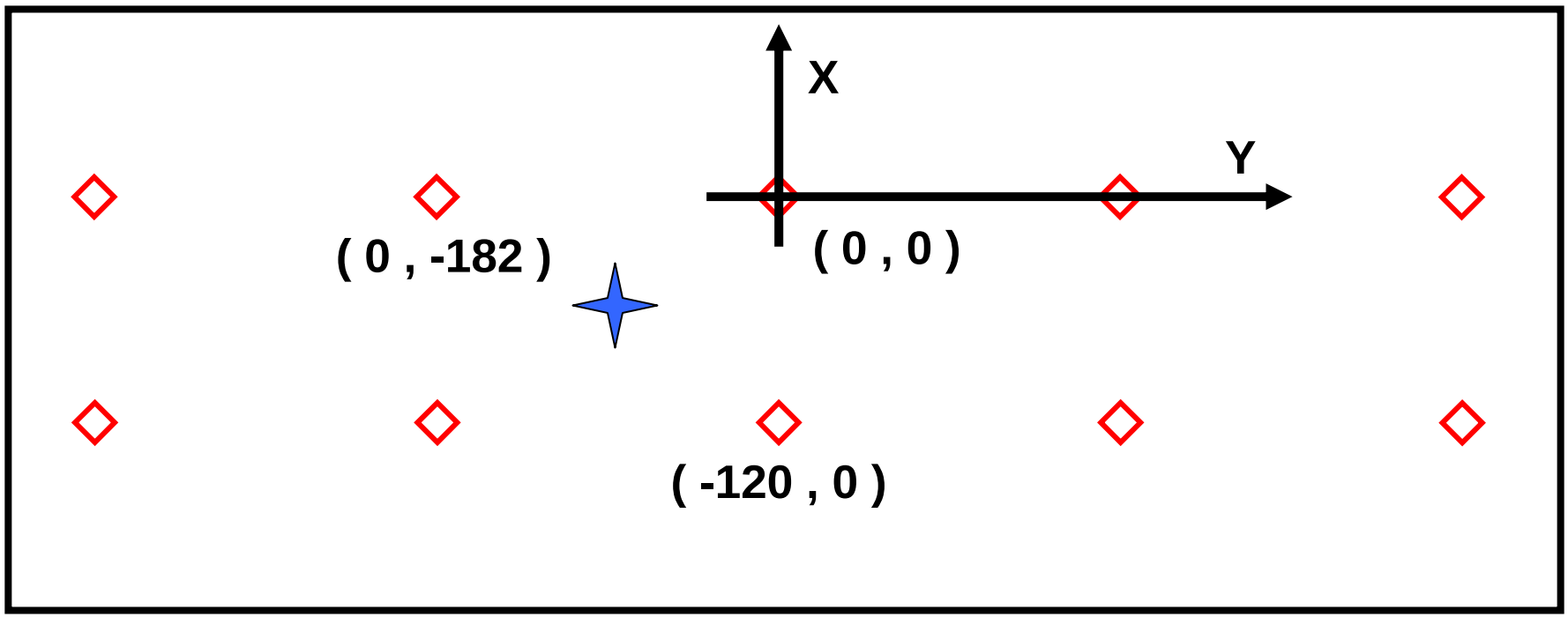
- Determines ranges of mobile clients by sending RF and ultrasonic signals to fixed beacons above.

Robot Interaction Using Cricket, an Indoor Positioning System

- Uses range information to triangulate position of client.



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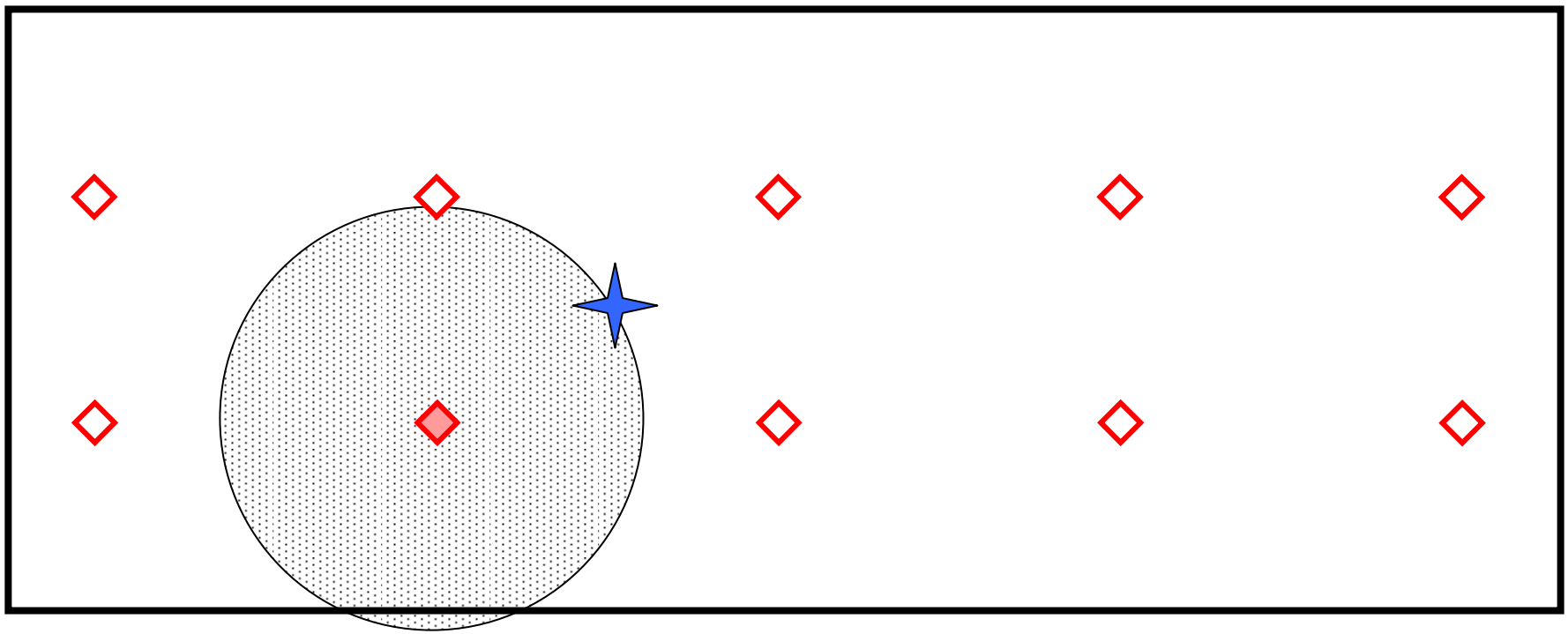

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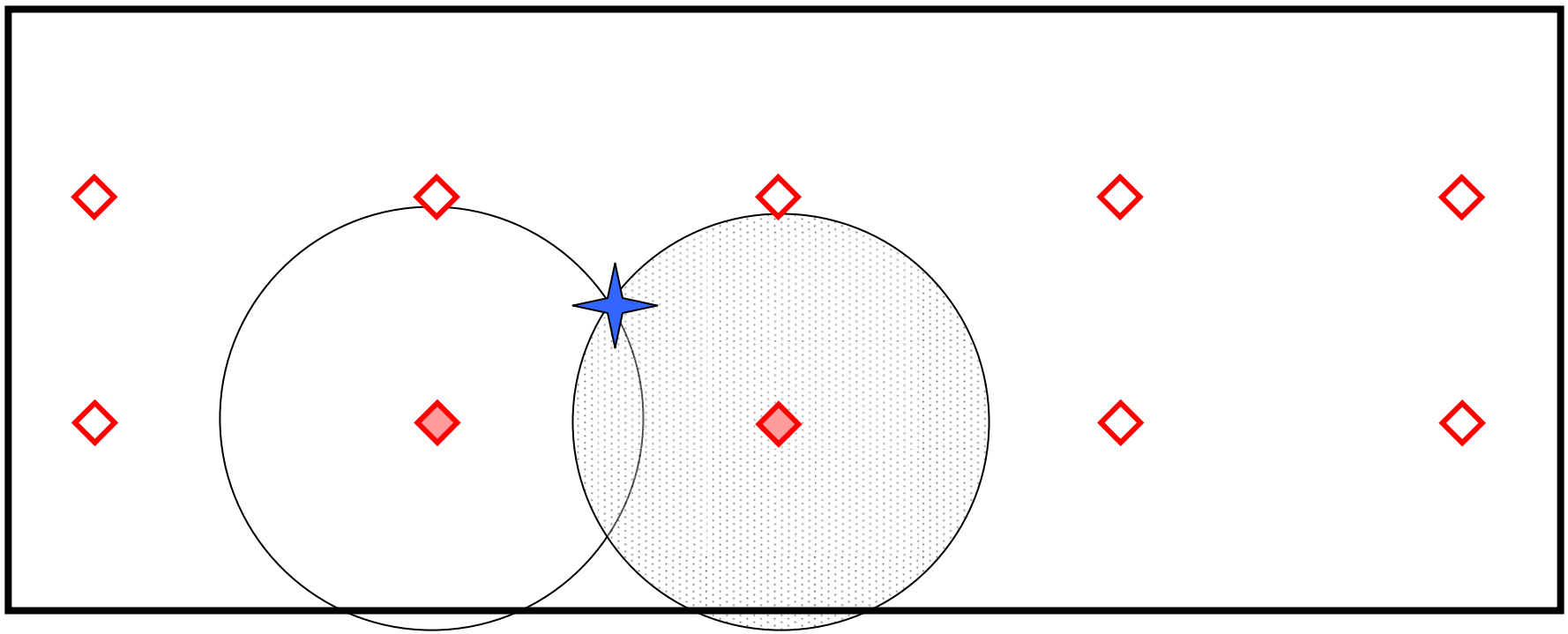

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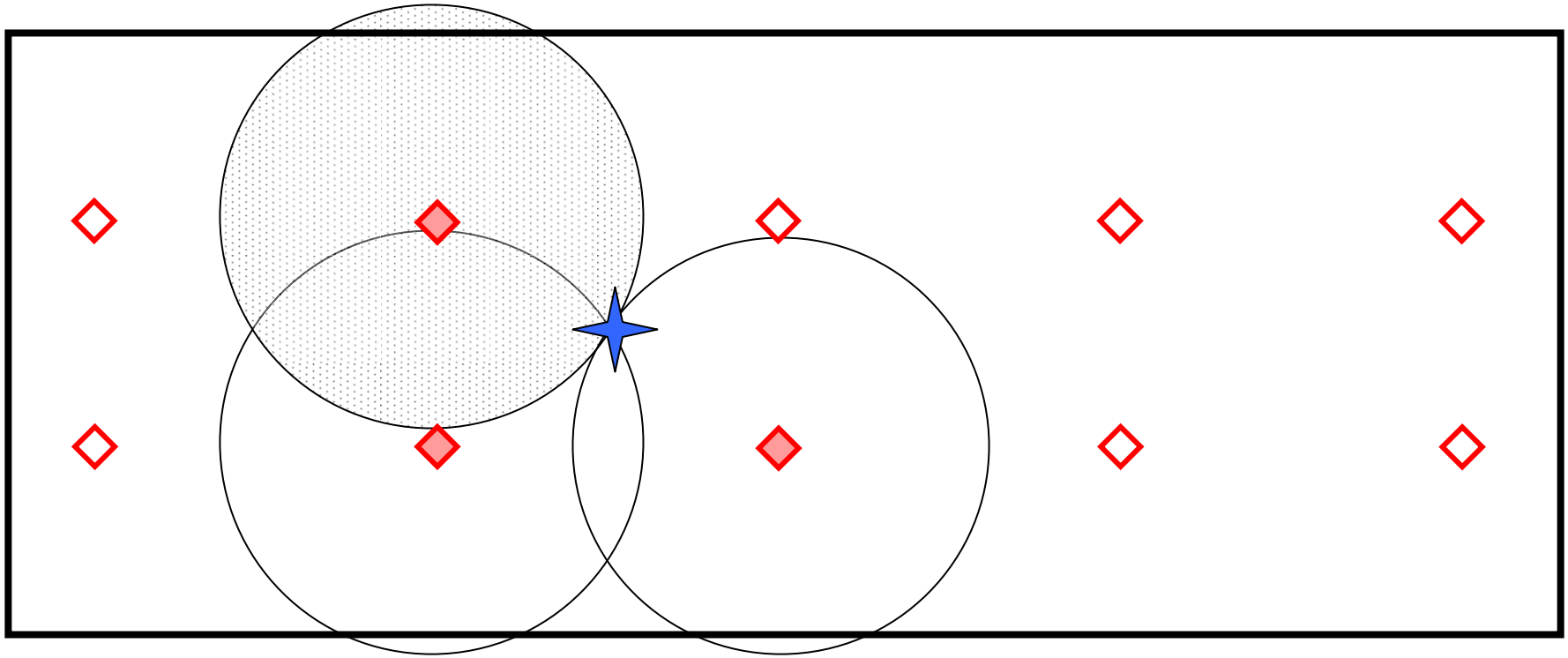
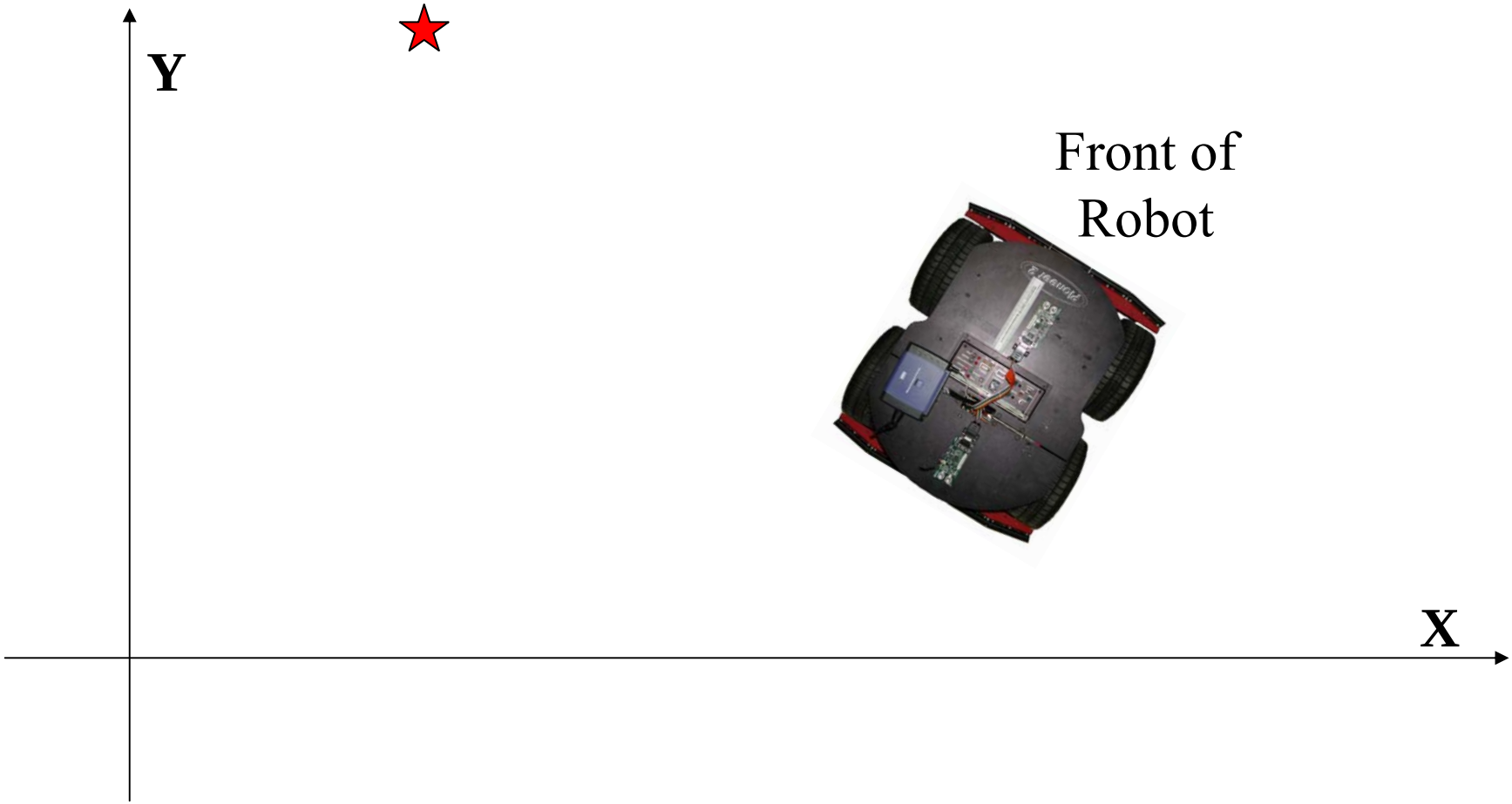


- Tracking a Fixed Destination



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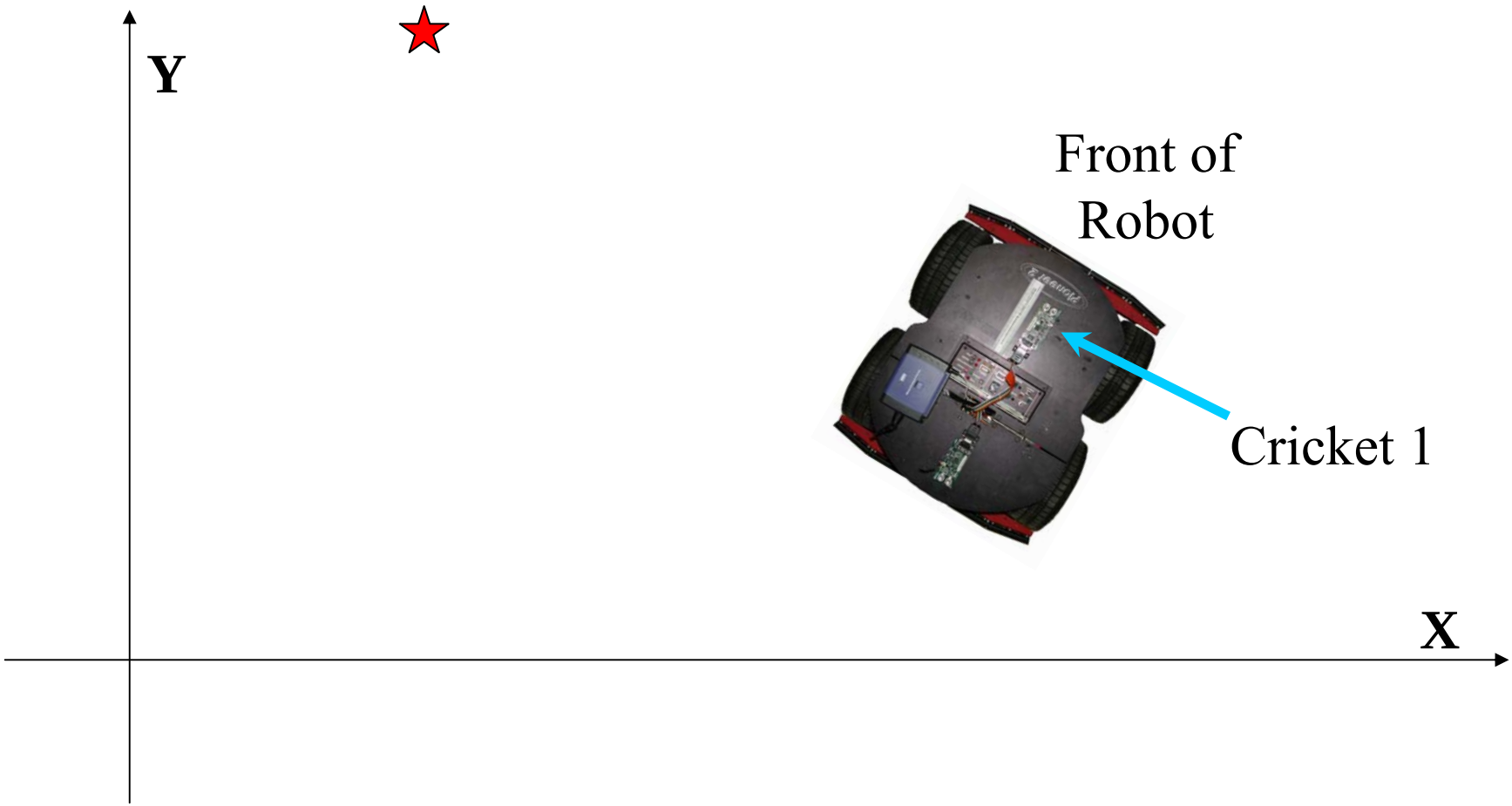

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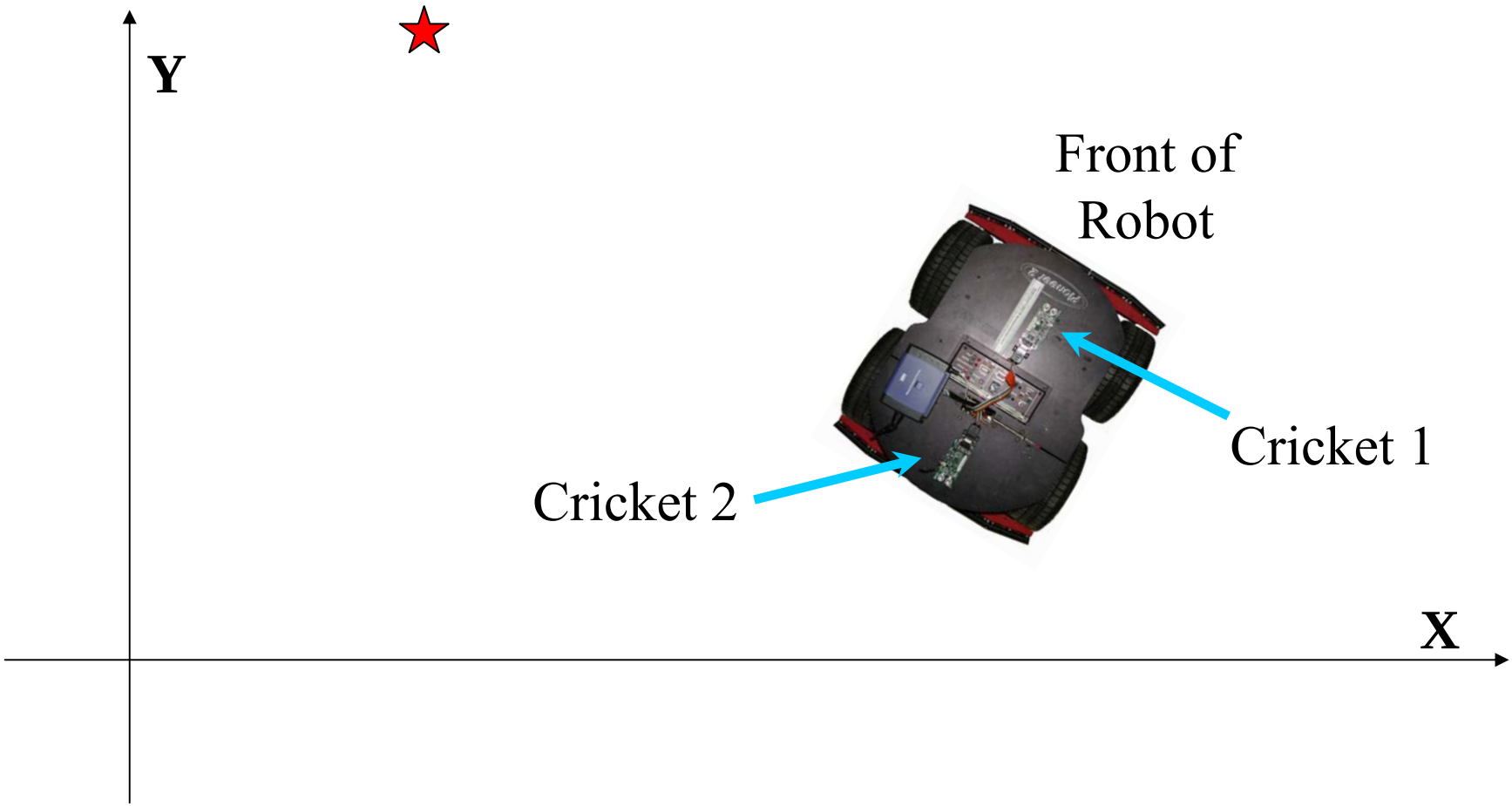

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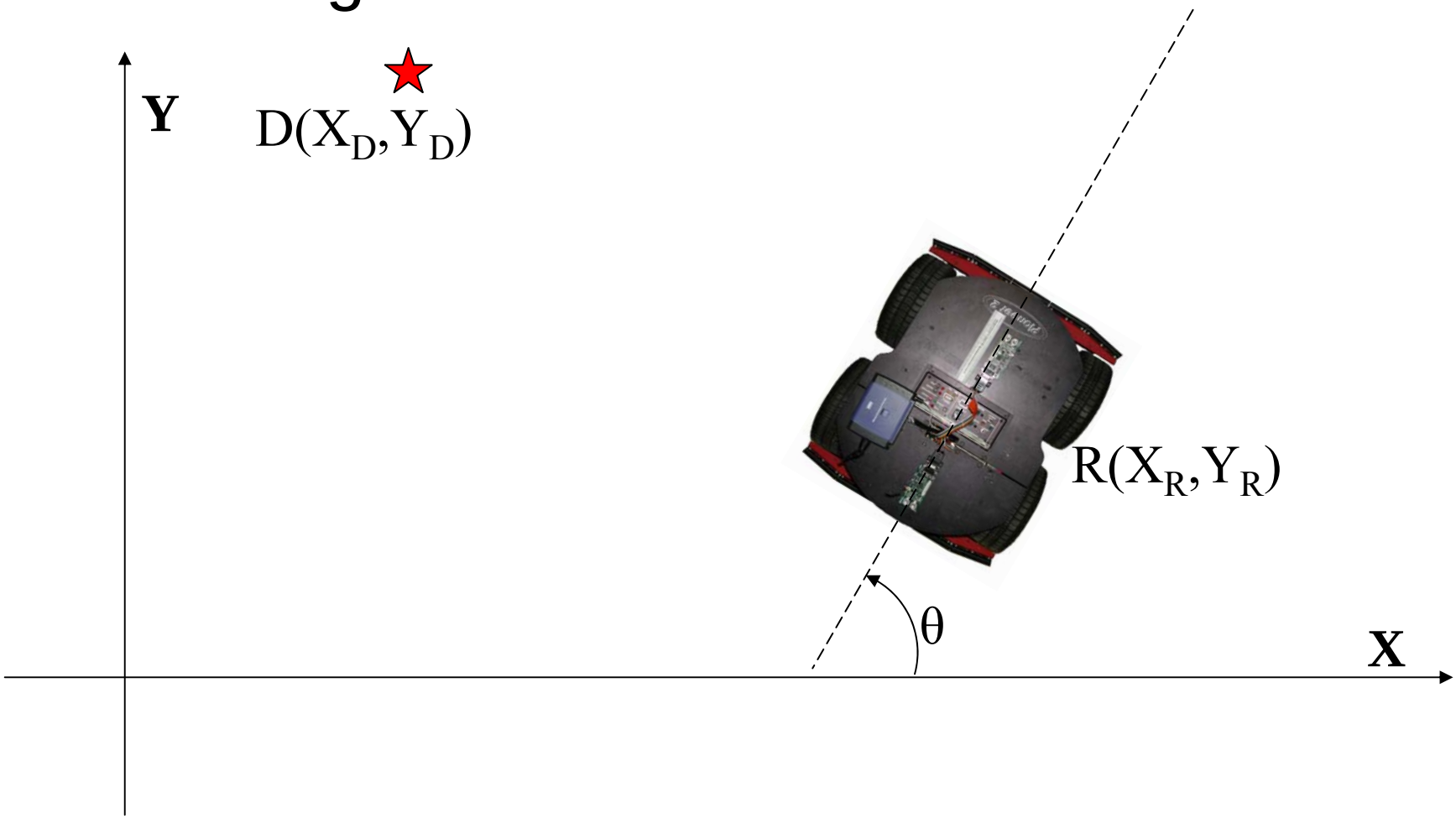

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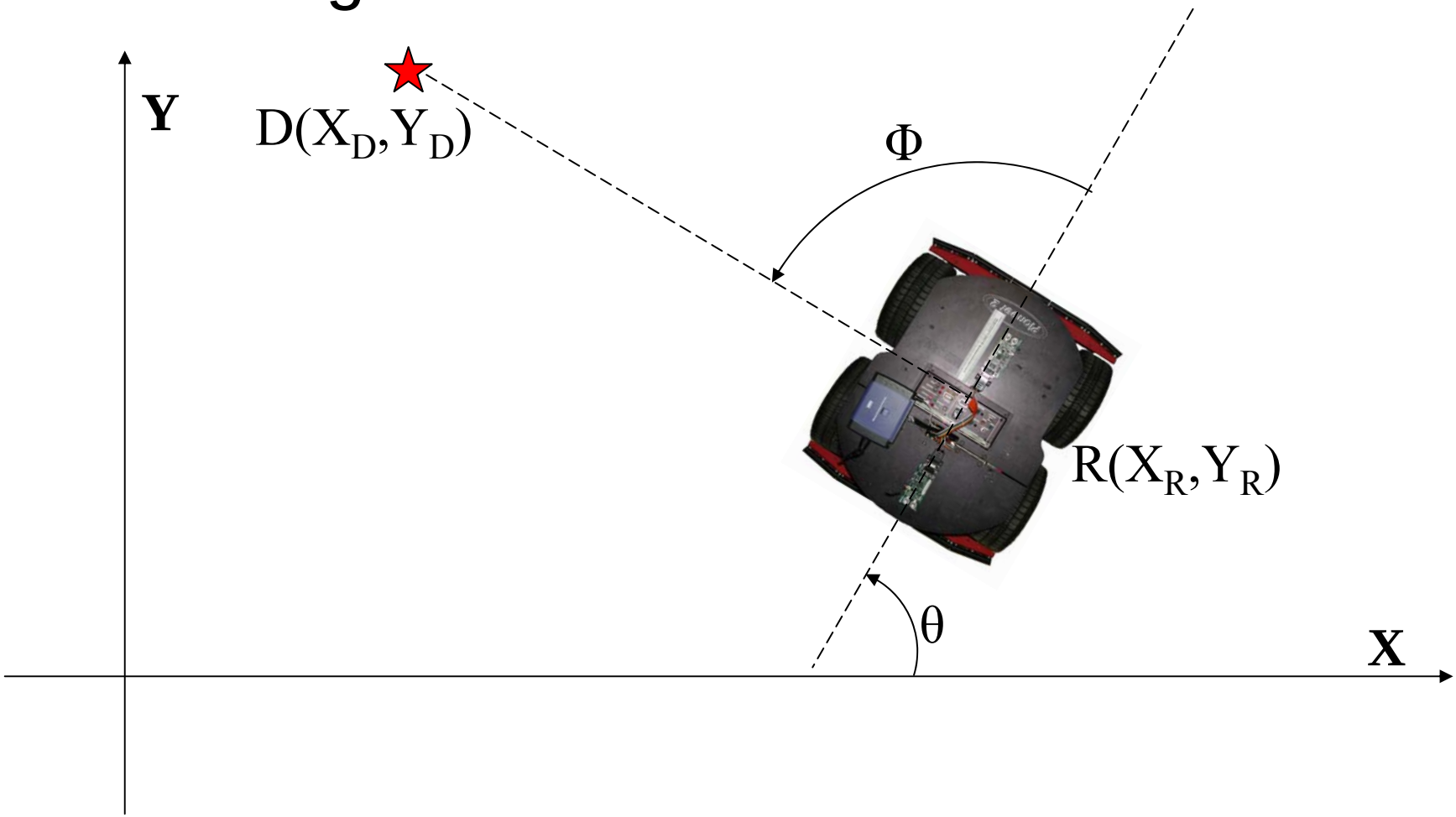

Robot Interaction Using Cricket, an Indoor Positioning System

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- Tracking Another Robot
  - Robot is a moving destination.
  - How to find the coordinates of another robot?

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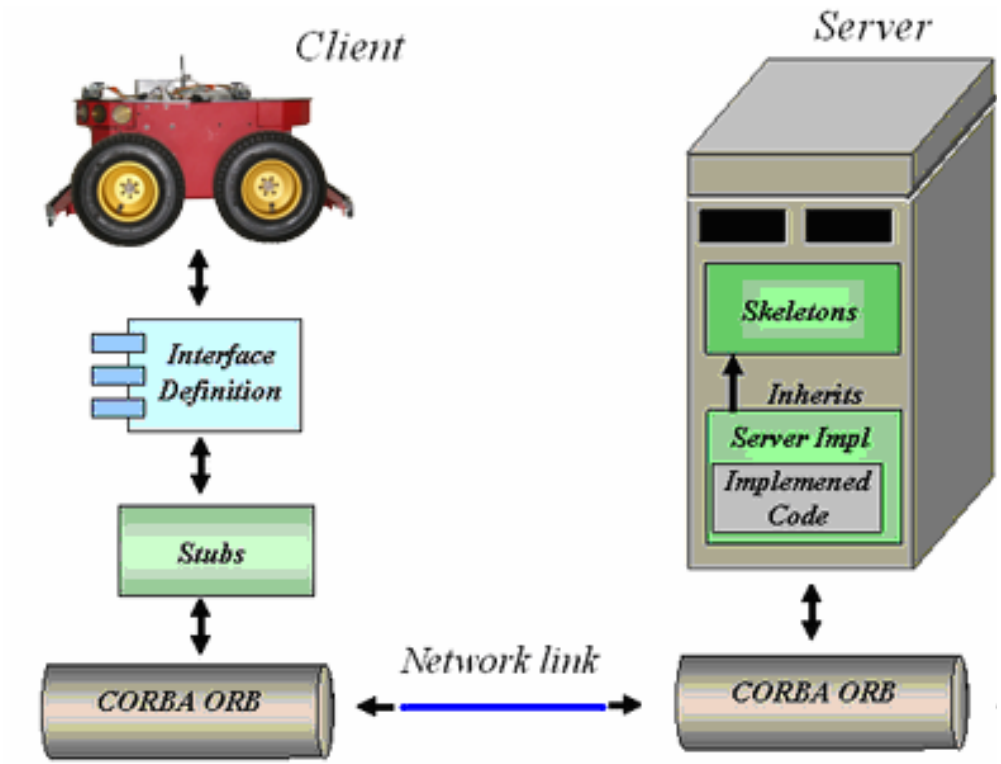

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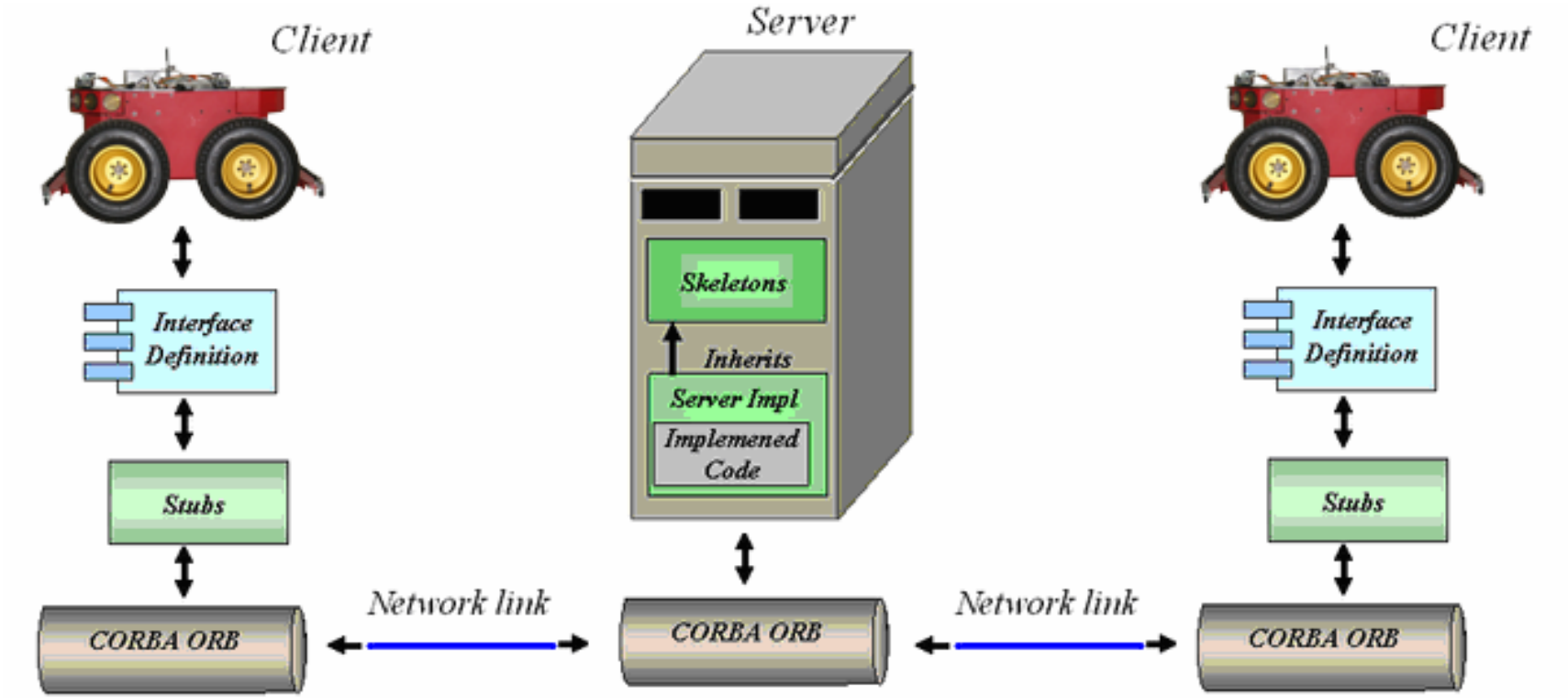

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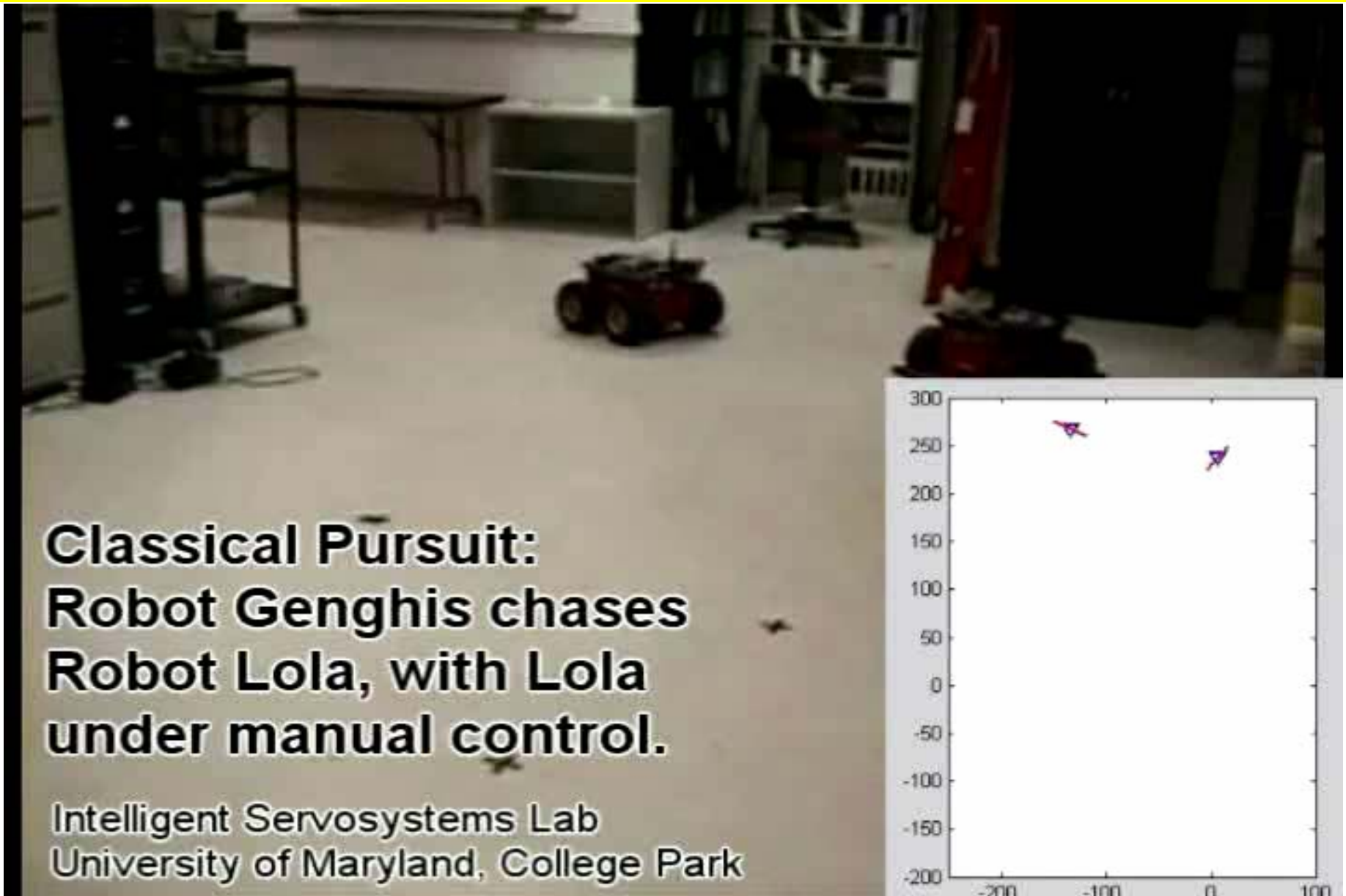

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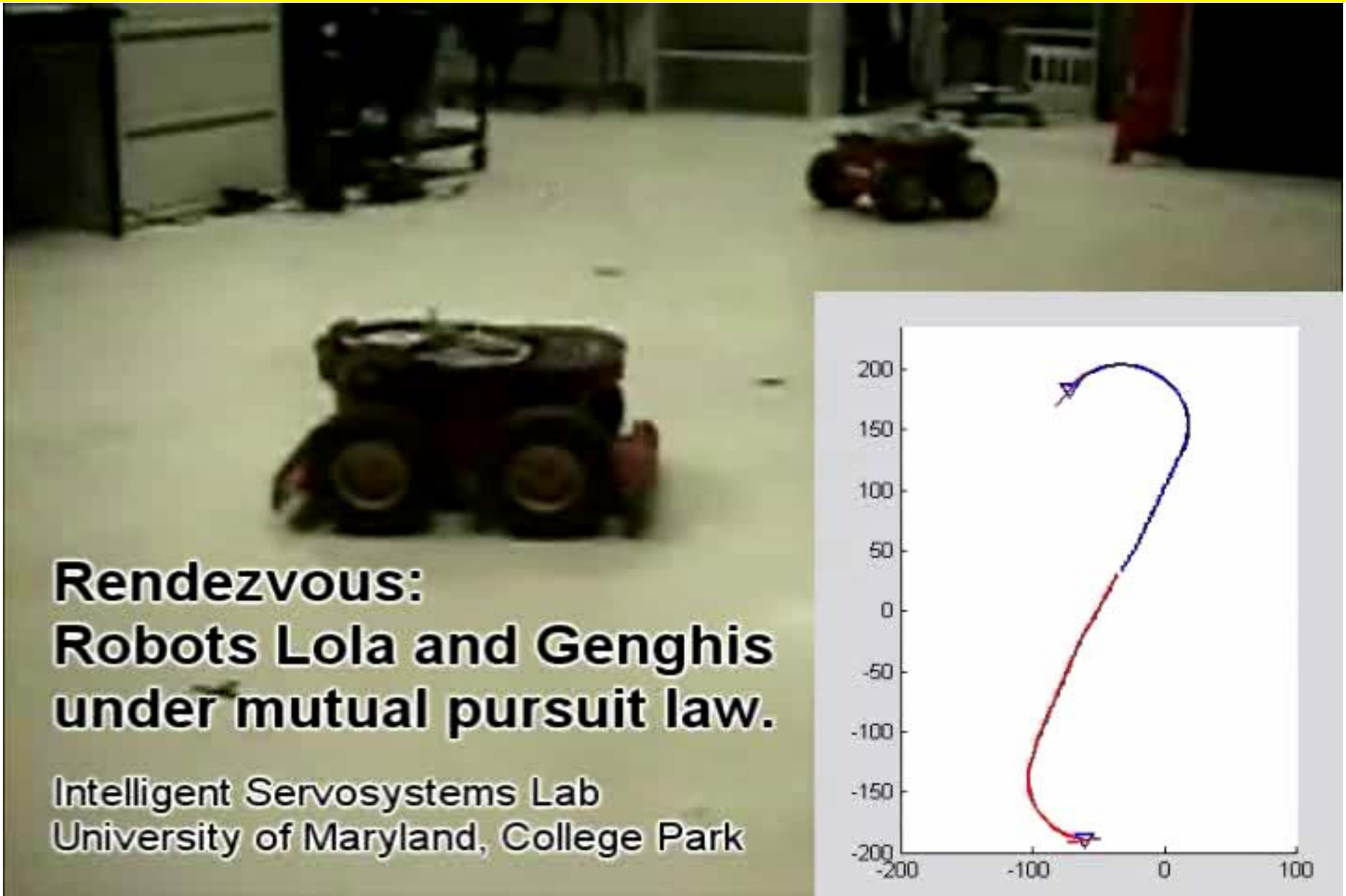

Robot Interaction Using Cricket, an Indoor Positioning System

- Control Law Implementation
  - MDLe – Motion Description Language, extended version.
  - Independent of robotic system platform.

Project Website:

www.isr.umd.edu/Labs/ISL/Summer06project/