Spatial Computing → Directionality

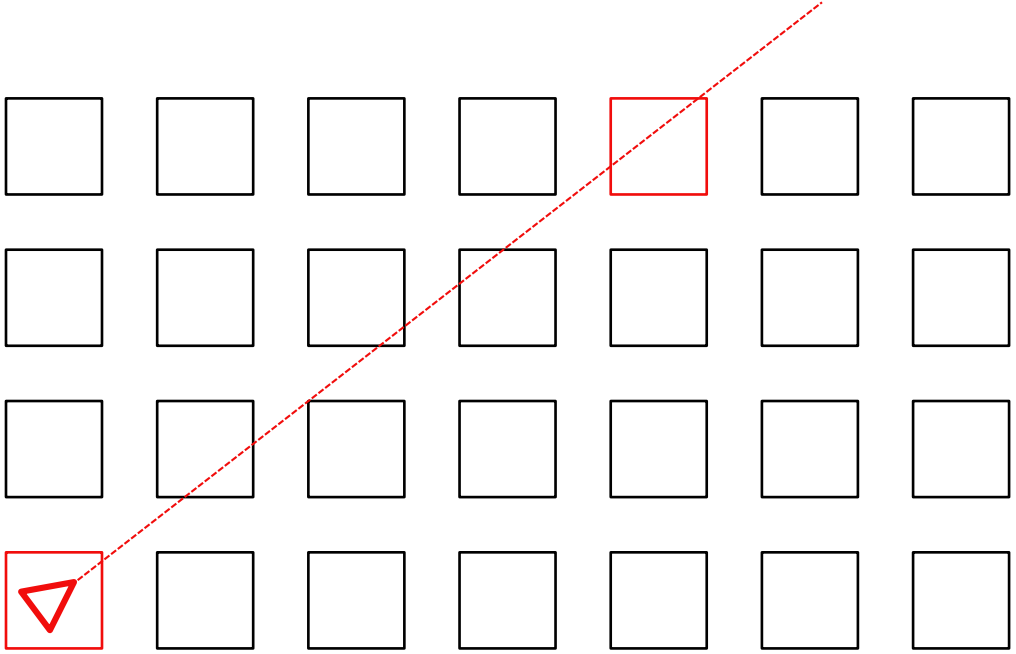
Workshop → Directionality as Connection

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Directionality

Direction

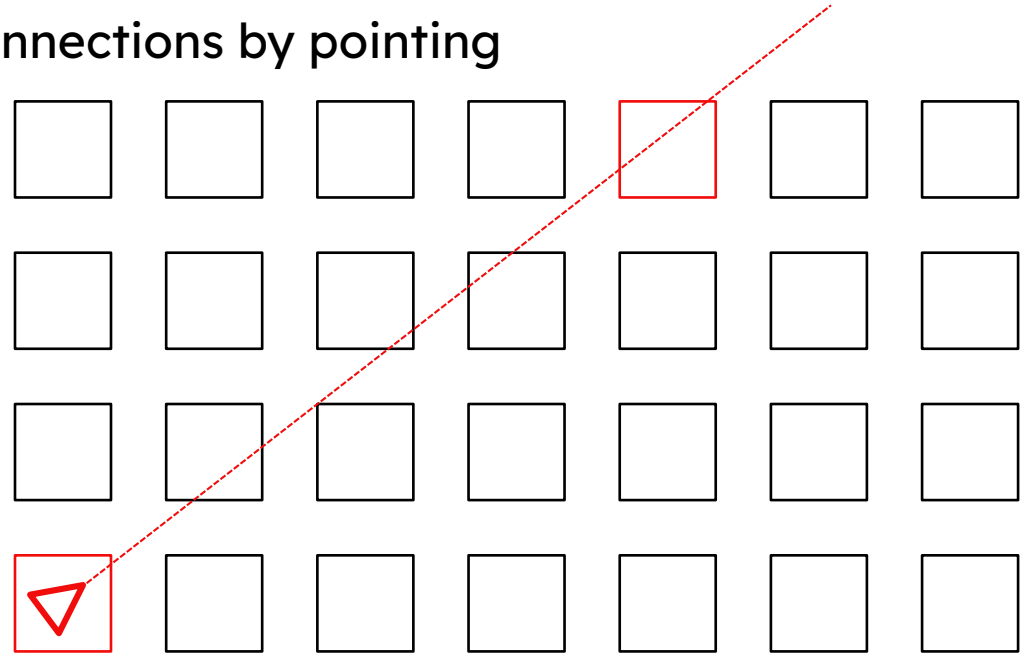
Direction gives an orientation against a similar frame of reference as to our systems of location. It's a way of describing the connection between two locations relative to one or the other.



Direction

It gives us two primary capabilities:

1. describing an agent's traversal of space in terms of which location will be occupied next
2. creating a connections by pointing



Direction + Orientation

In space, some objects have an inherent direction.











Directionality as Connection

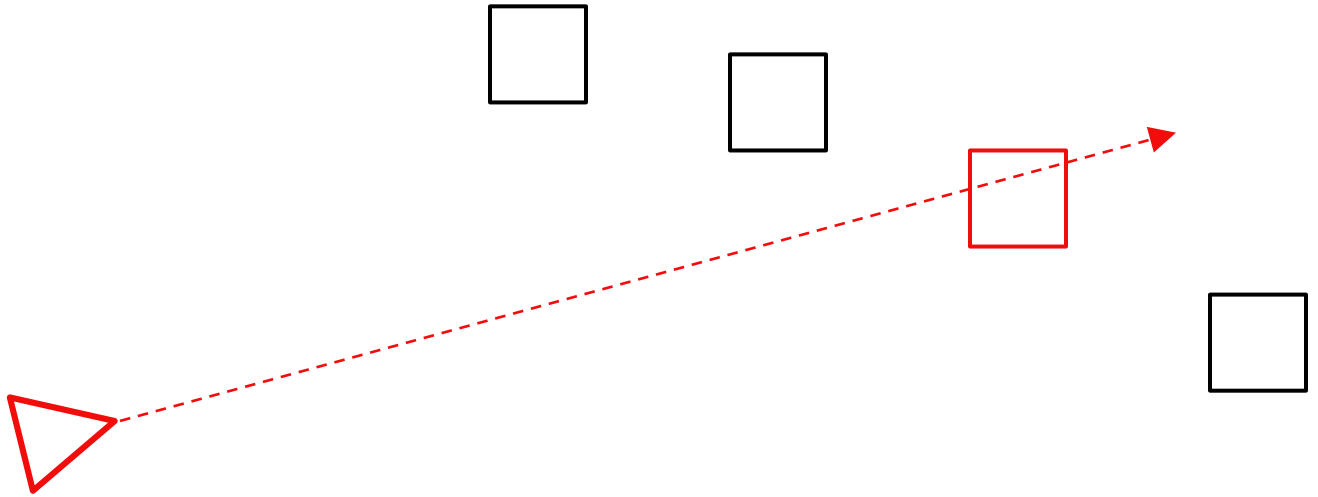
In pairs, take a few minutes for the following exercises:

Generate some real-world examples of using implied direction as a means of connection. (10 min) → Share in today's workshop thread.

Pick a computing task from the class list (see Slack or last slide). Speculate on what part of that computing task may be facilitated by object referents and a directional connection. (10 min) → Share in today's workshop thread.

Directionality as Connection

Let’s explore using a sense of direction to connect multiple referents.
Use the QR codes to add a direction to some objects, extend a ray from them, then find the other referents that ray intersects.



Directionality as Connection

Let's explore using a sense of direction to connect multiple referents:

1. Imbue some of your referents with a direction.
    1. QR codes should have a direction you can use to draw a ray.
    2. Use hand tracking or body pose detection to create a ray from a finger or hand.
2. Add functionality to that connection (at least two):
    1. transfer information from one referent to another
    2. turn a directional referent to pick a mode that changes something in the environment (turns lights on, turns them off, etc.)
    3. others?
3. Demonstrate in a short video and post to the Slack thread.
4. Bonus: Try this without a screen and provide audio or projected feedback.

Appendix → Computing Tasks

“augmenting human intelligence,” altering images, analyzing, calculation, capturing ideas aka “brain-dumping,” coding, communication, creativity + design, coding, data entry, data transfer, documenting thoughts to written language, duplication, entertainment, finding + locating, gaming, information discovery, information obfuscation + destruction, information retrieval, information searching, making music, monitoring, navigating/wayfinding, organization, painting with light (digital creation), playing games, progress tracker, receiving, record-keeping, research, routing/pathfinding, sending data, sending messages, storing things, taking photos, time management, watching video, writing documents