

DIFFERENT REALITY MODALITIES FOR MUSEUM NAVIGATION

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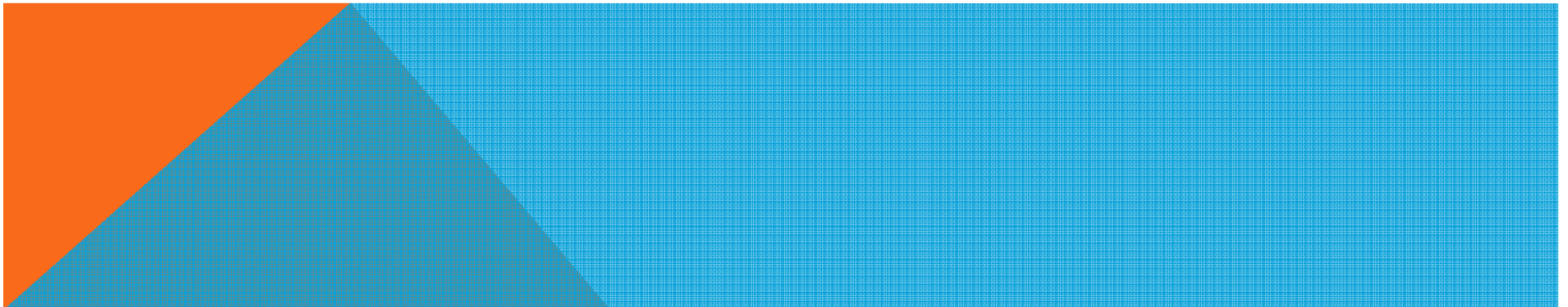
BACKGROUND

Methods

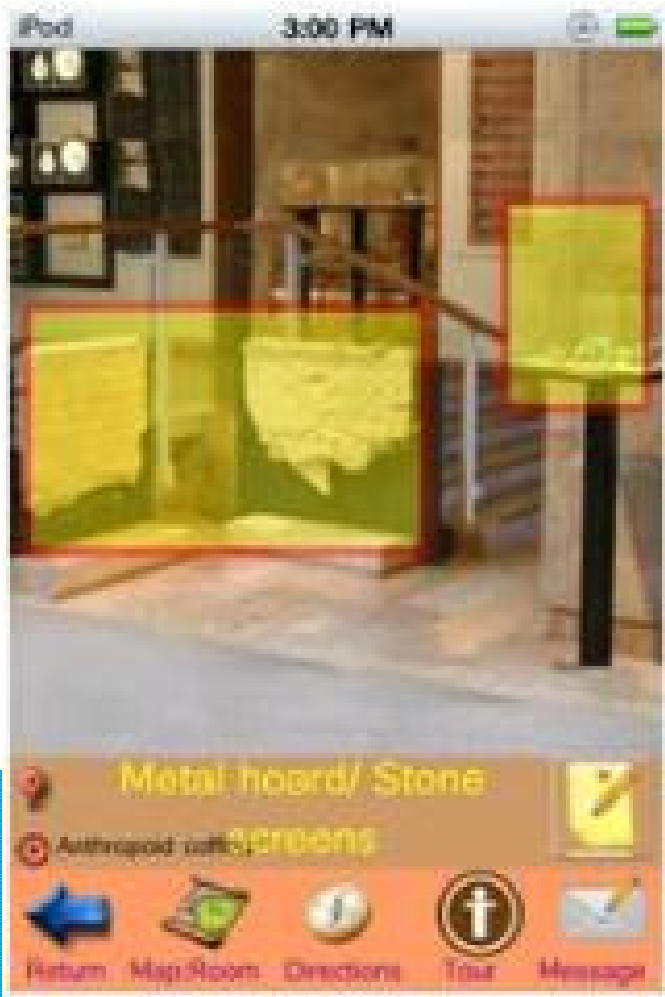
- RFID, QR-codes, YAH maps, dead-reckoning, etc.

Augmented Reality Devices

- Smartphones, PDAs, tablets, projection



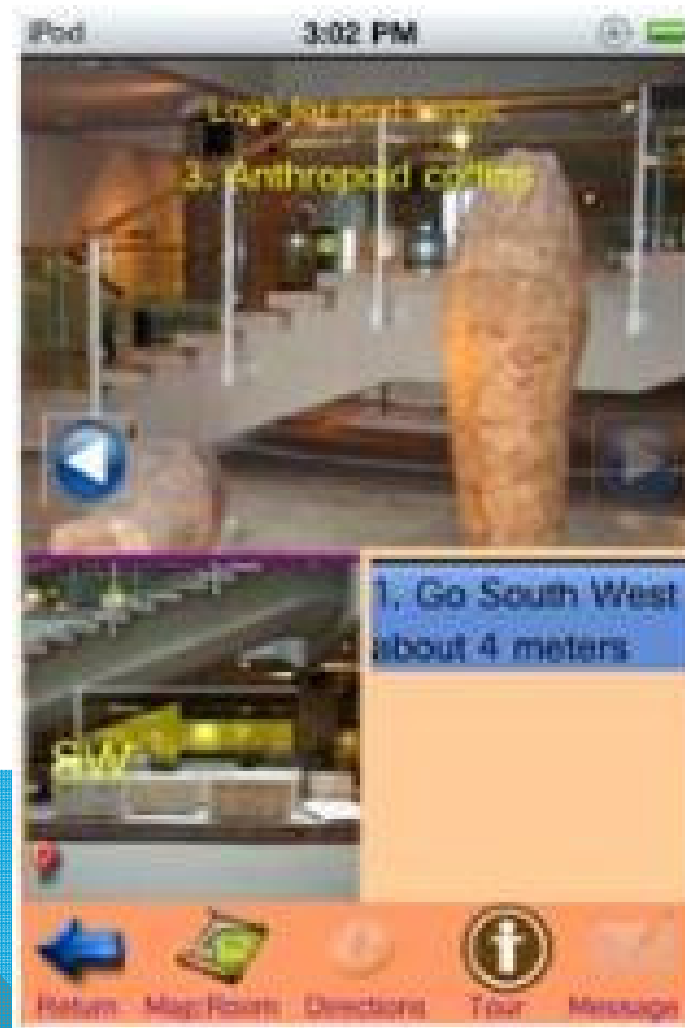
DIRECTIONS I



DIRECTIONS II



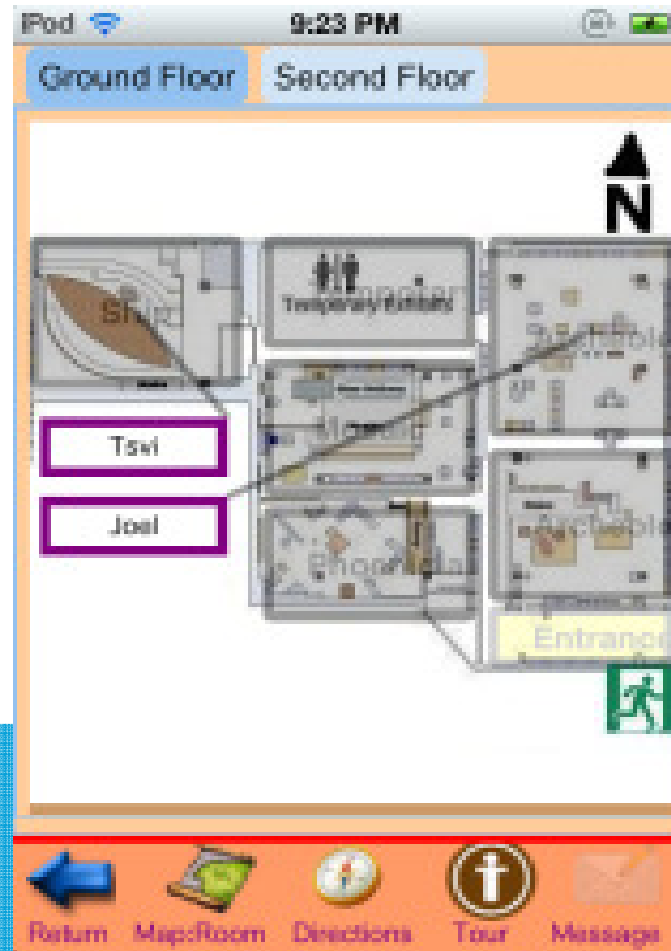
DIRECTIONS III



DIRECTIONS IV



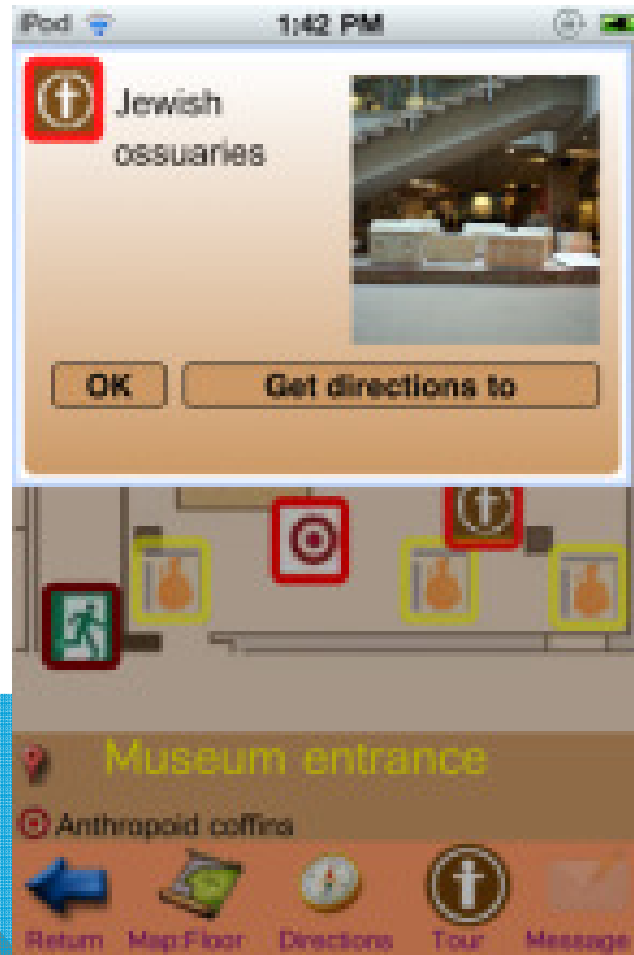
MAPS I



MAPS II



MAPS III

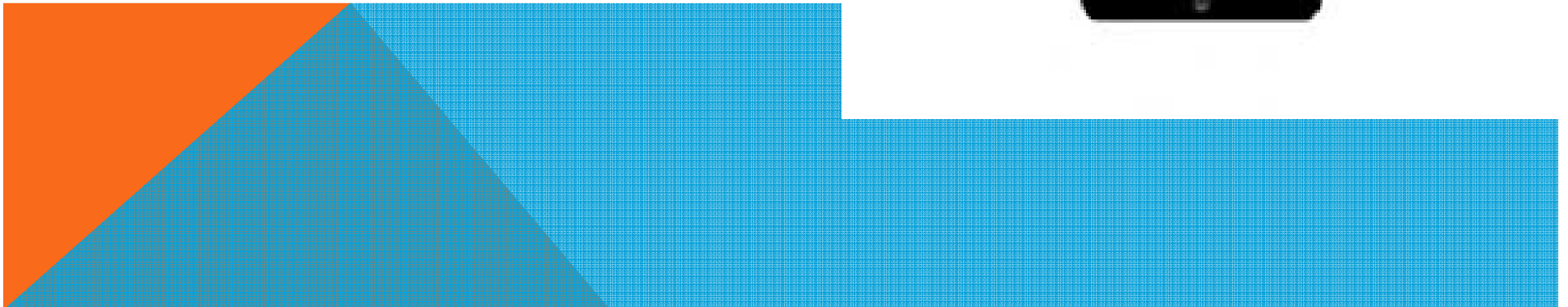


DEVICES

PROJECTOR



IPAD & IPOD

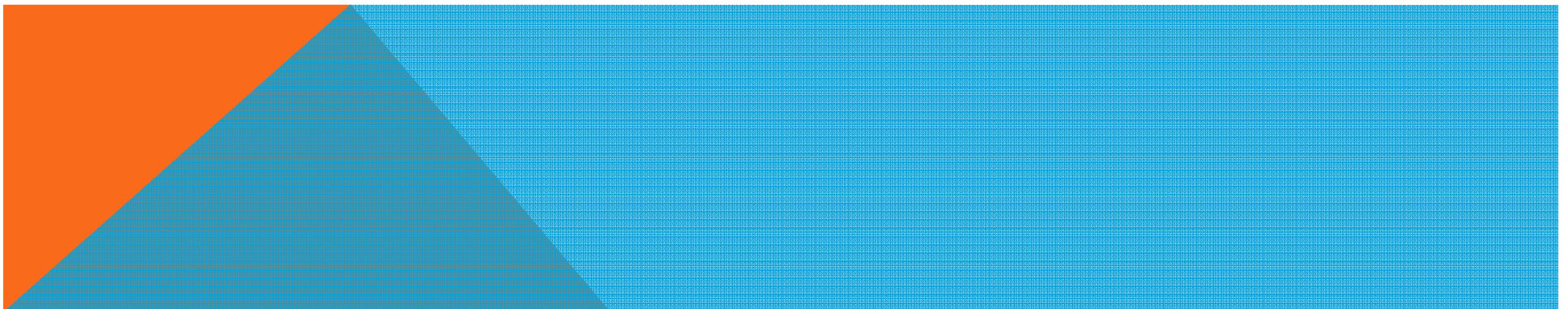


ENVIRONMENT

	Device			
	Projector		iPod/iPad	
Maps	I	Mixed /Dual Reality	II	Dual Reality
Directions	III	Augmented Reality	IV	Dual Reality

QUADRANT I MAP WITH PROJECTOR

- Similar to wall maps
- YAH icon provides connection to real world
- Collaborative planning
- May be personalized ('groupalized')

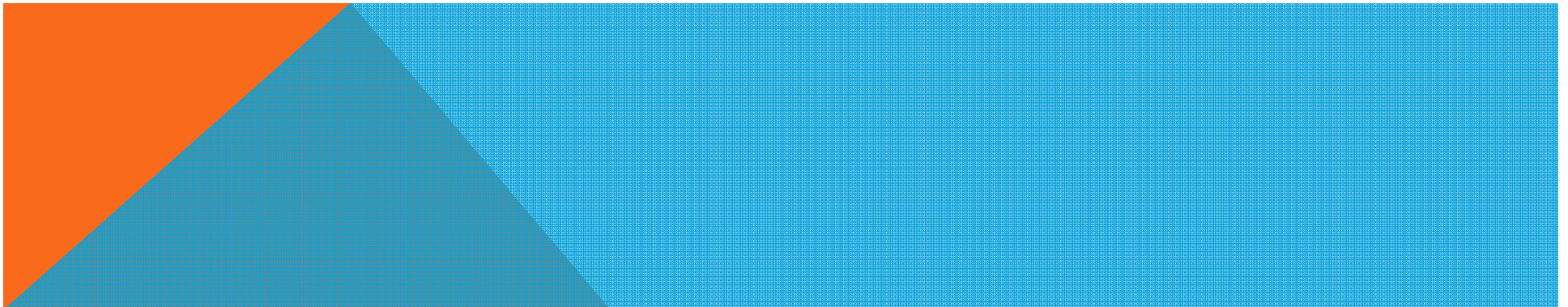


ENVIRONMENT

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QUADRANT II MAP ON IPAD

- Small Display
- One person did the navigation
- YAH icon increased satisfaction
- May be personalized

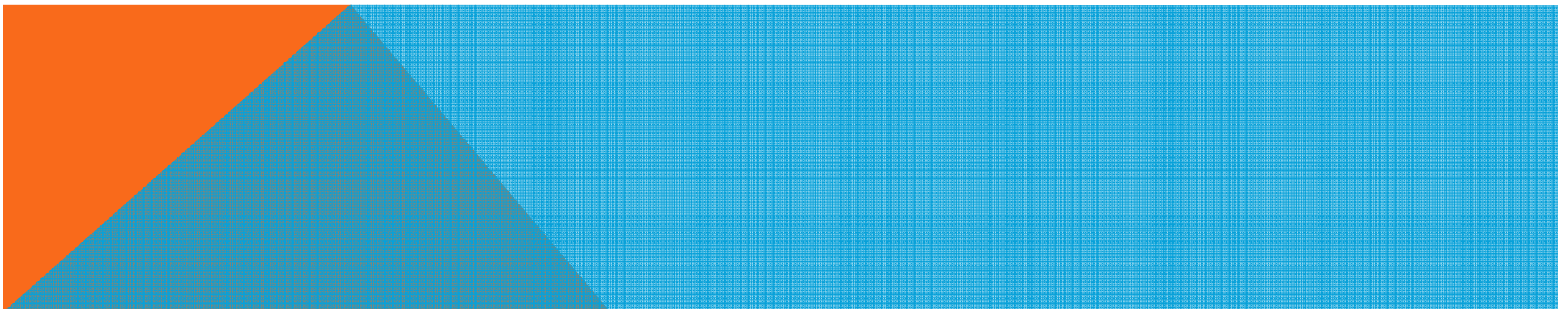


ENVIRONMENT

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QUADRANT III DIRECTIONS ON PROJECTOR

- In general well received
- Understood connection between arrow and were to go
- Technology constraint of not being updated quickly enough deemed major drawback

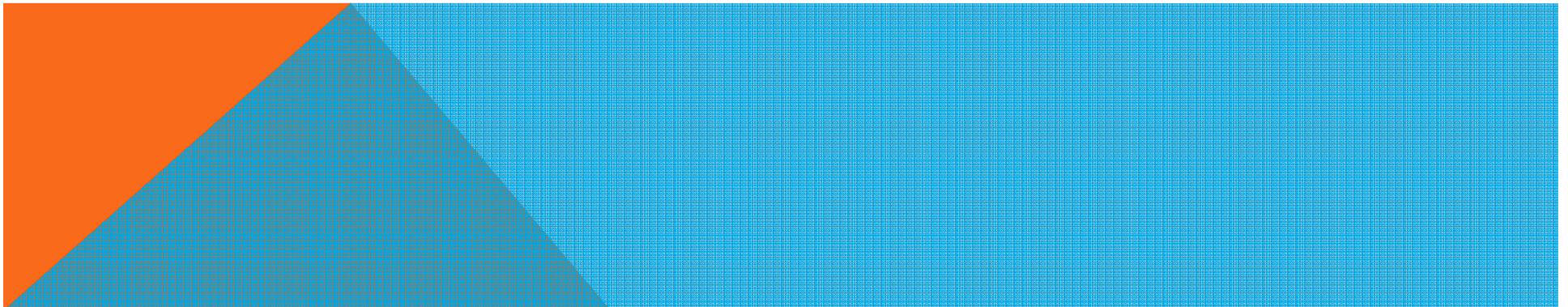


ENVIRONMENT

	Device			
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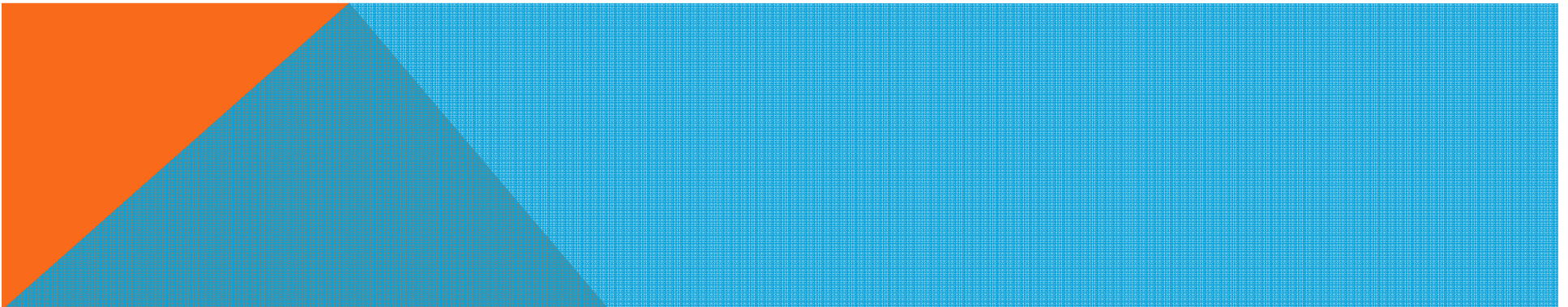
QUADRANT IV DIRECTIONS ON IPOD

- Smaller screen viewed as a difficulty (even iPad)
- Hard to correlate between screen and direction
- Again, technology constraint of not being updated quickly enough deemed major drawback



QUALITY OF REALITY CORRESPONDENCE (QORC)

- Accuracy
- Stability
- Latency
- Update Frequency



CONCLUSIONS

Devices

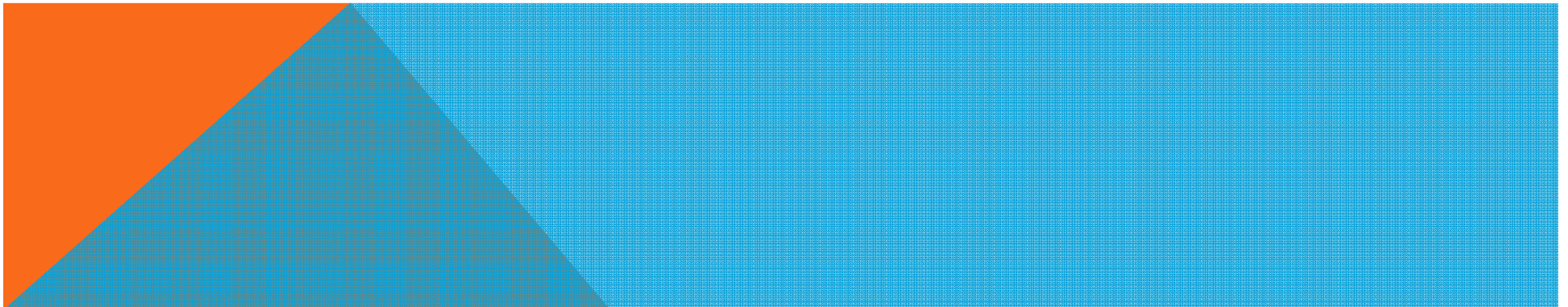
- With iPad harder to augment ergonomically
- Maybe Google glasses will solve
- Still problem of sharing
 - Duplicated vs. shared

Augmentation vs. Virtual

- Direction tend towards augmented interfaces
- Maps tend toward virtual interface
 - Less sensitive to QoRC

New opportunities for indoor navigation

- Mobile device vs. large display
- Contextual and Personalization





THANK YOU

Questions?