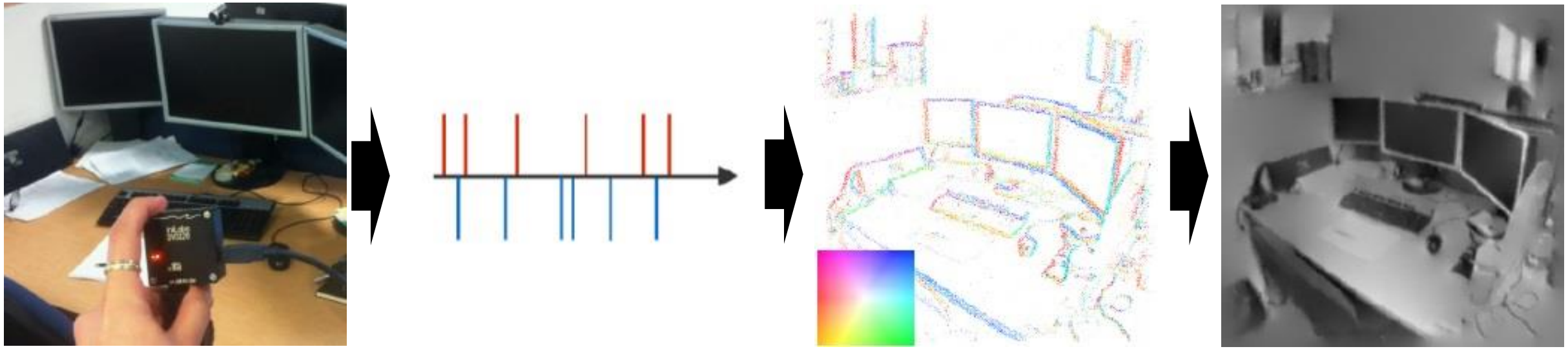
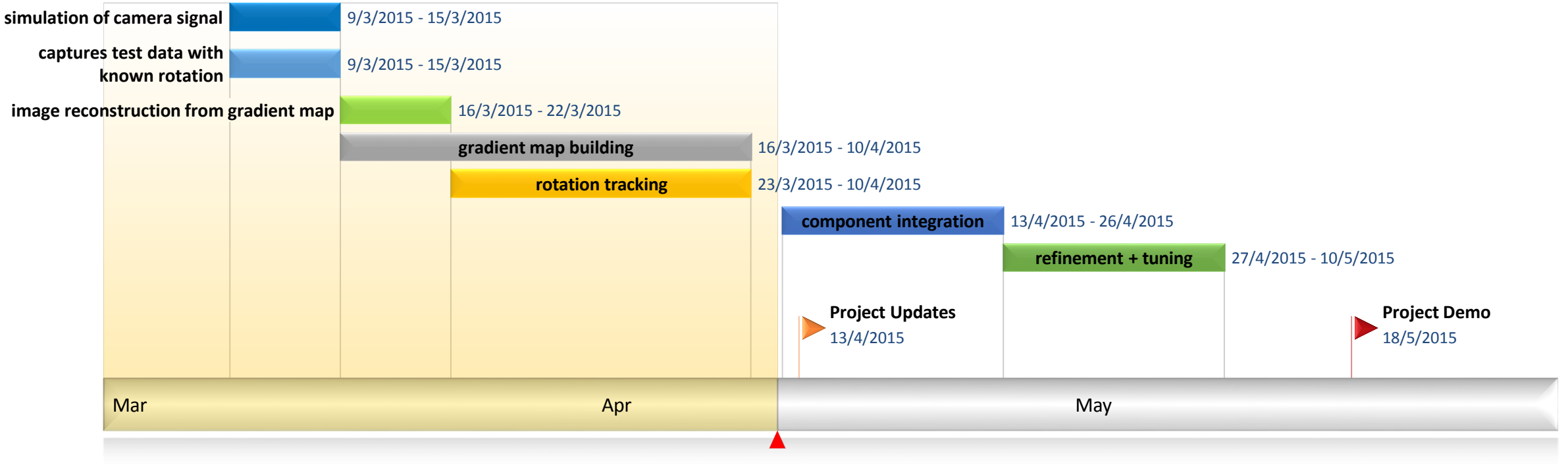
# IMAGE RECONSTRUCTION FROM DVS

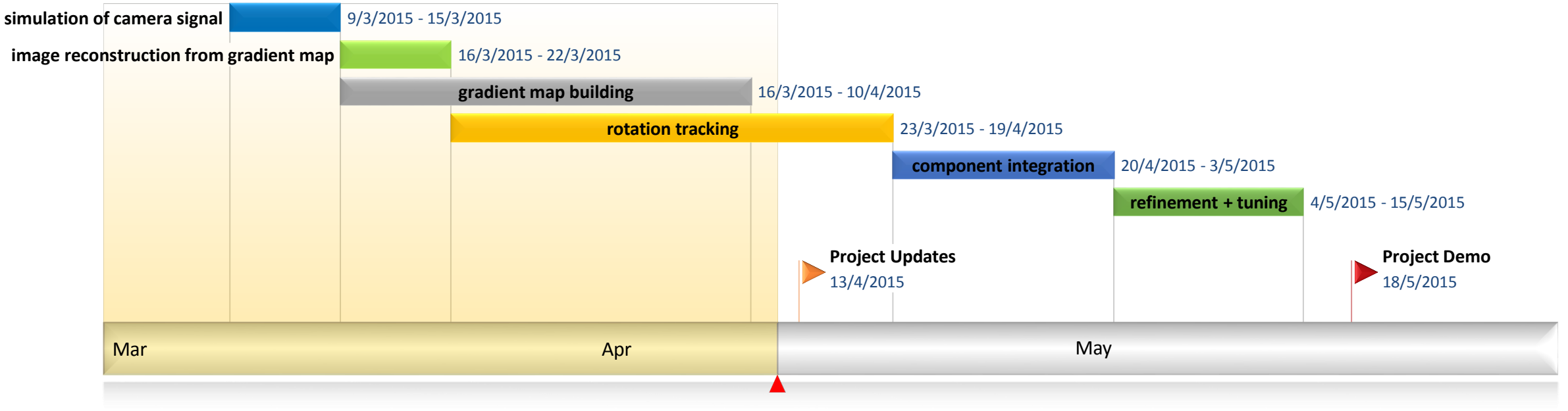
MARCEL GEPPERT & SAMUEL BRYNER



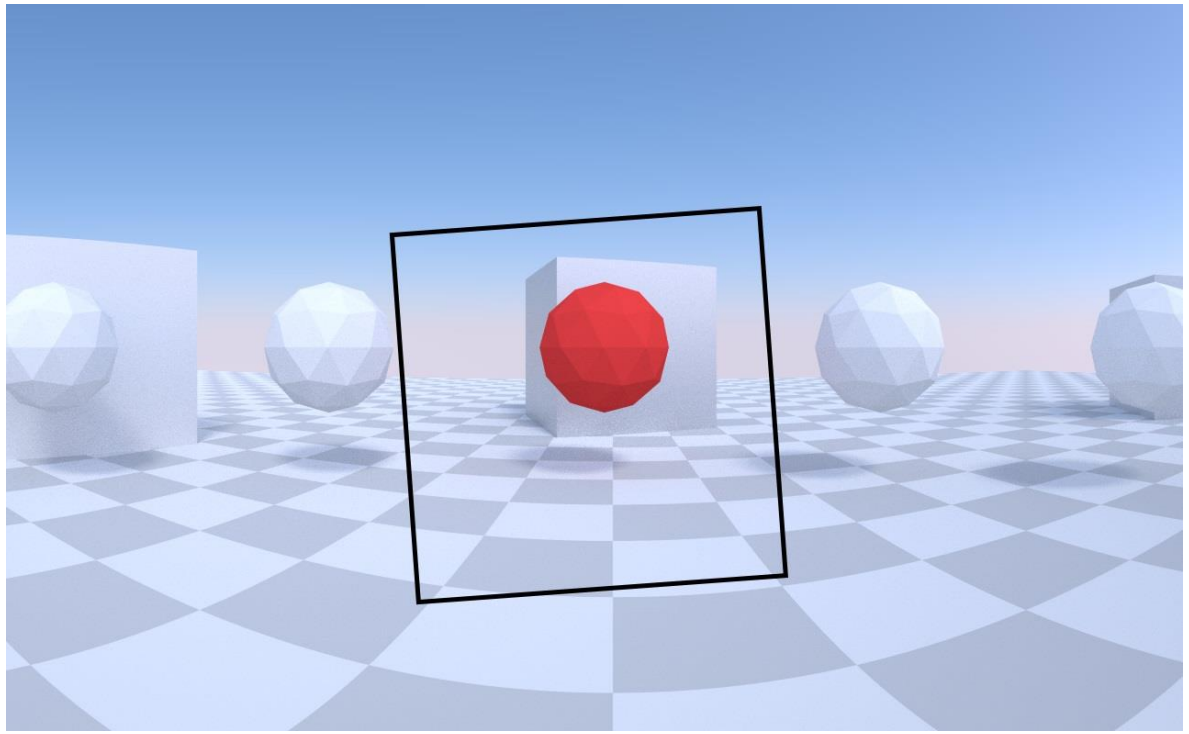
# SCHEDULE

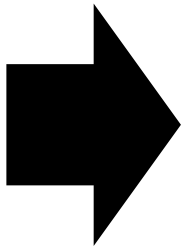

simulation of camera signal
9/3/2015 - 15/3/2015
captures test data with known rotation
9/3/2015 - 15/3/2015
image reconstruction from gradient map
16/3/2015 - 22/3/2015
gradient map building
16/3/2015 - 10/4/2015
rotation tracking
23/3/2015 - 10/4/2015
component integration
13/4/2015 - 26/4/2015
refinement + tuning
27/4/2015 - 10/5/2015
Project Updates
13/4/2015
Project Demo
18/5/2015
Mar
Apr
May

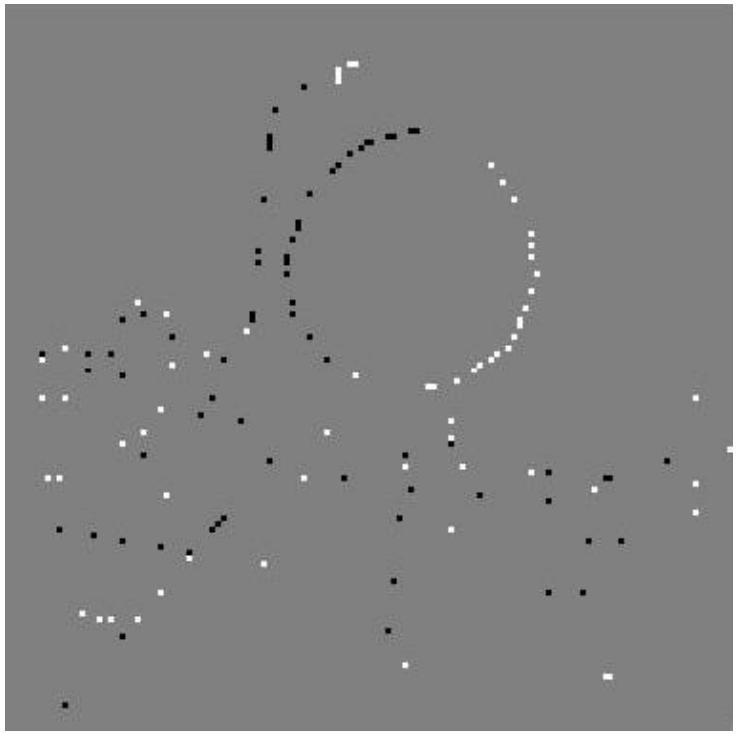
# UPDATED SCHEDULE



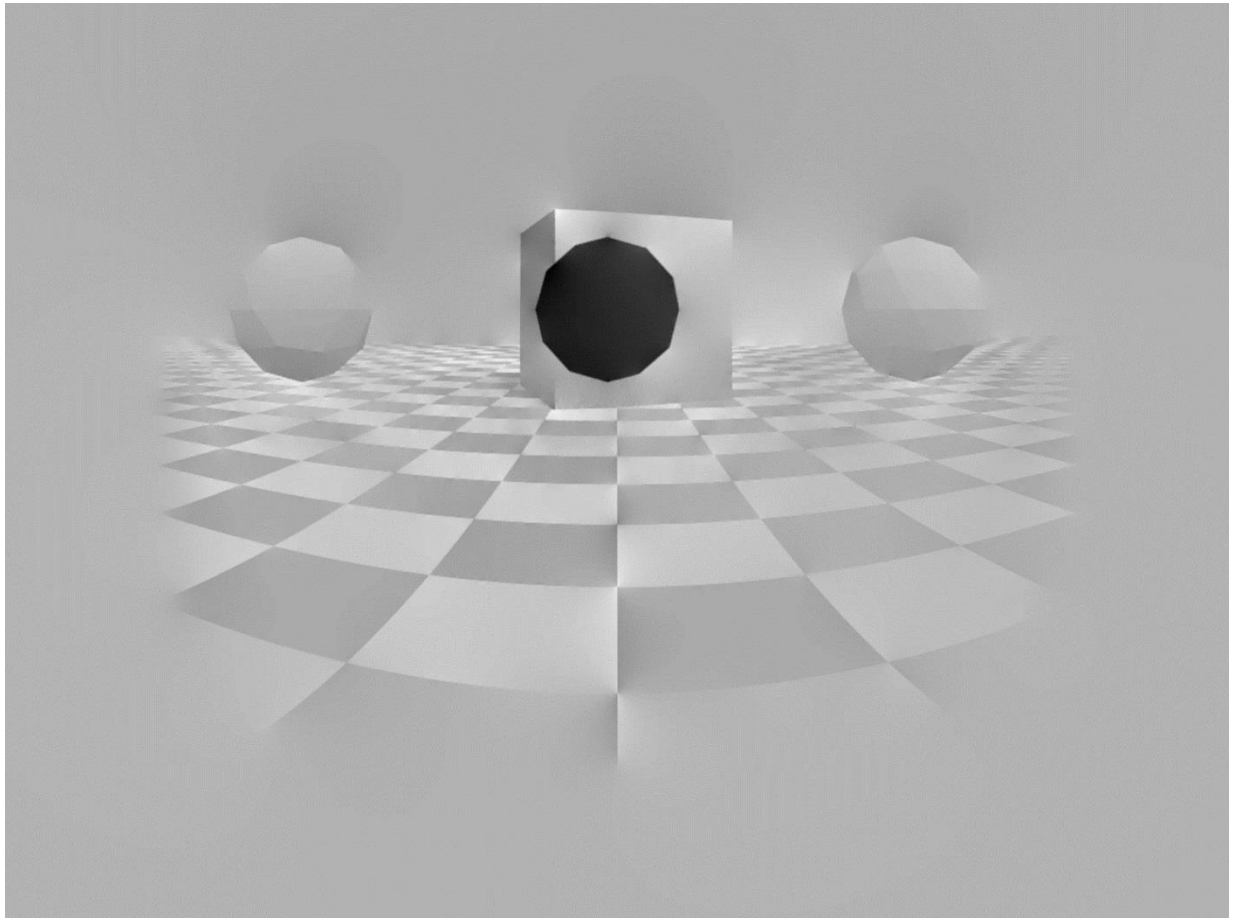
# CAMERA SIMULATION





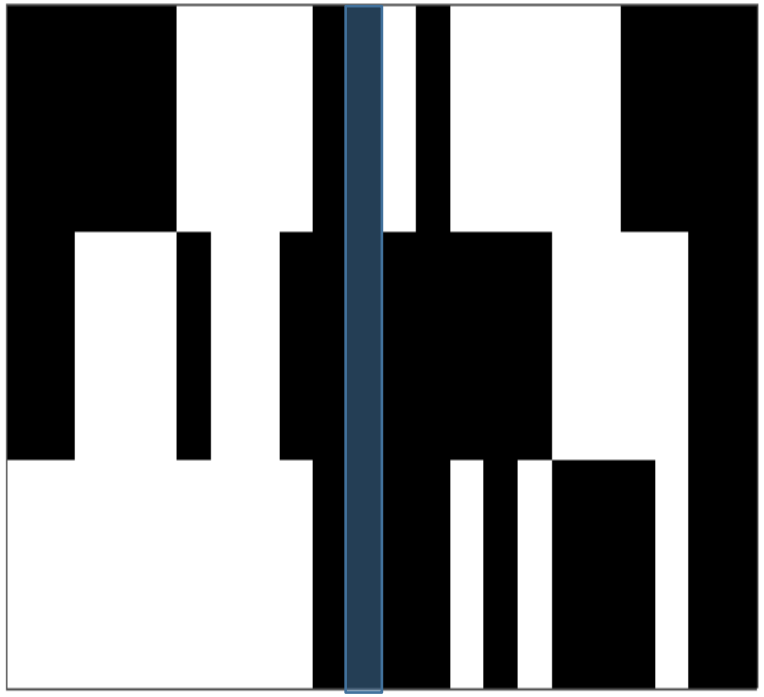


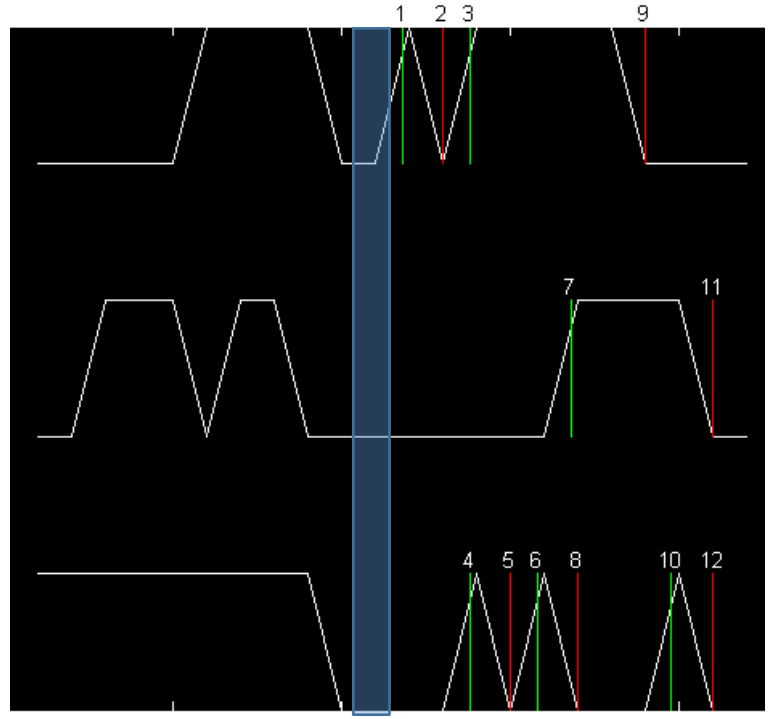
# RECONSTRUCTION

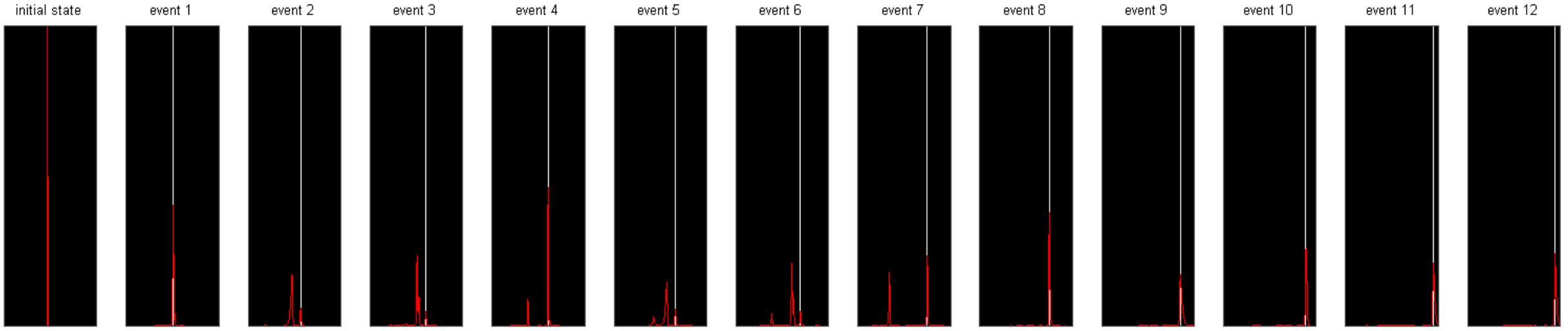


# TRACKING IN 1D

initial camera position



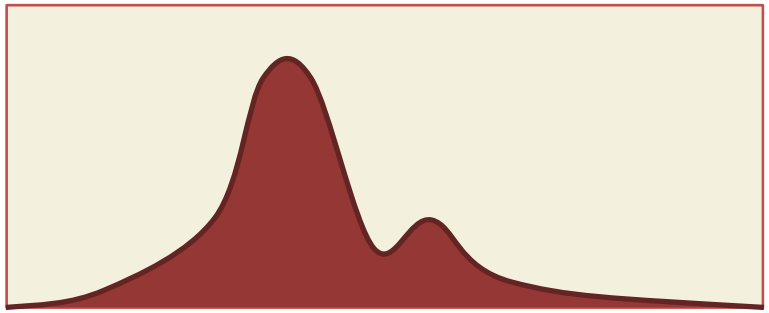


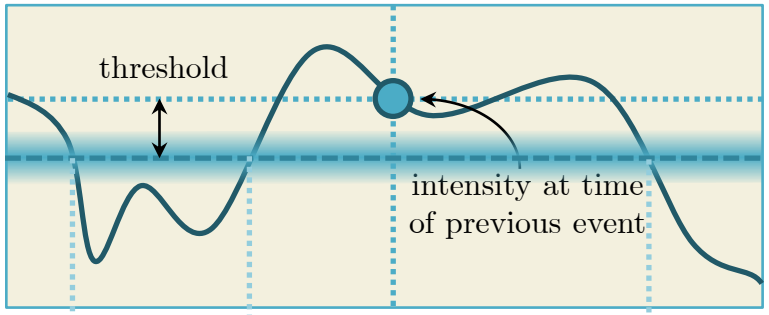
# TRACKING: WE'VE GOT AN EVENT!

Where did we come from? Where was the last event of this pixel generated?

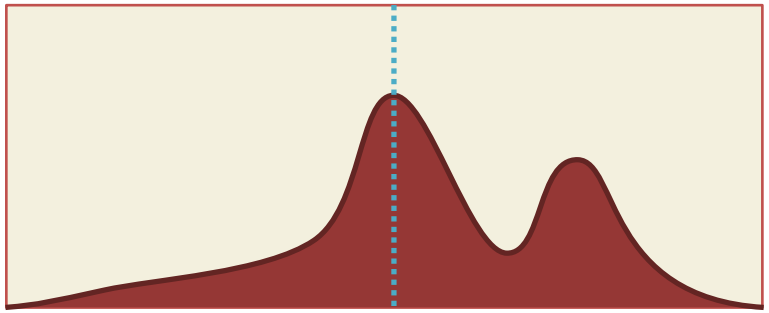
position at time of last event $(t - \tau)$



intensity map (the image)

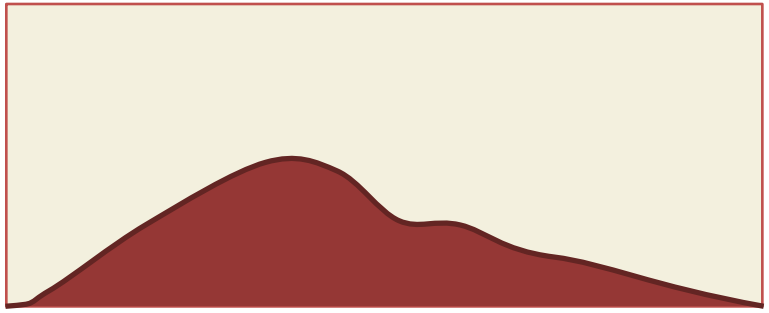



last event at same pixel $(t - \tau_c)$



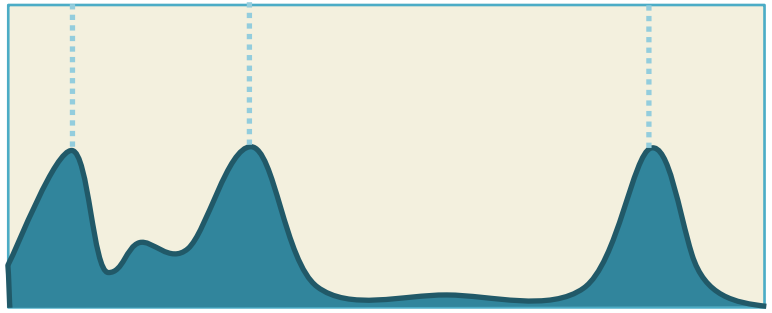
⇒ possible origin points

after movement prediction:



⇒ possible destination points

likelihood of correspondence



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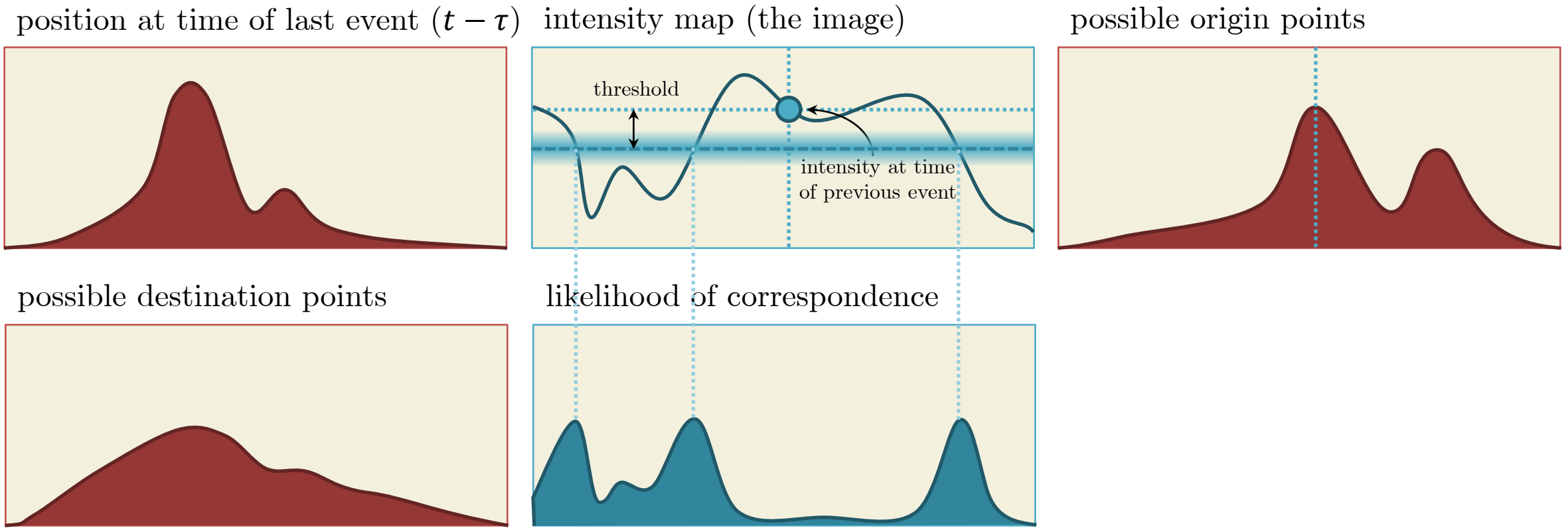
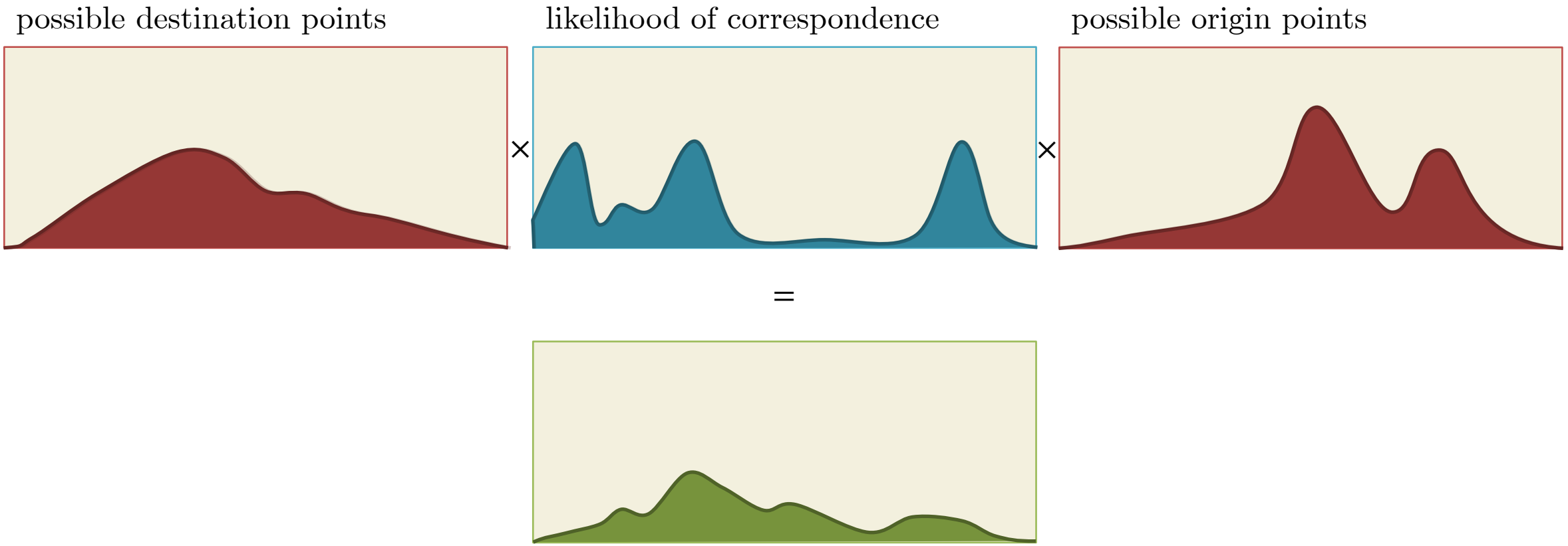


# TRACKING: WE'VE GOT AN EVENT!

Where did we come from? Where was the last event of this pixel generated?



# RECONSTRUCTION (LOW RESOLUTION)