Slide 16

Move and scan loop . Assuming that we know what we are looking for, when we enter an environment, our initial search strategy will involve orienting the head and perhaps walking to get the best viewpoint. From this vantage, we will initiate a sequence of fixations. If the target is not found we move to a new vantage point to continue the search.

Eye movement control loop. Planning and executing eye movements occurs between one and three times per second. This involves both the biasing mechanism, so that new candidate targets can be determined. In this example, the targets are clustered and a two-stage search strategy is used. The first stage involves tuning for and making an eye movement to a cluster of targets (seen as fuzzy blobs in the periphery). After the fixation is made, the blob is resolved into individual targets. The second stage involves tuning for and making an eye movement to a particular candidate target within a blob. The final tuning is based on orientation.

Pattern-testing loop. When the eye alights on a promising target area, the inner loop function is executed. This involves testing the pattern to see if it is the search target or not. The brain takes about one-twentieth of a second to make each test; typically between one and four tests are made on each fixation.