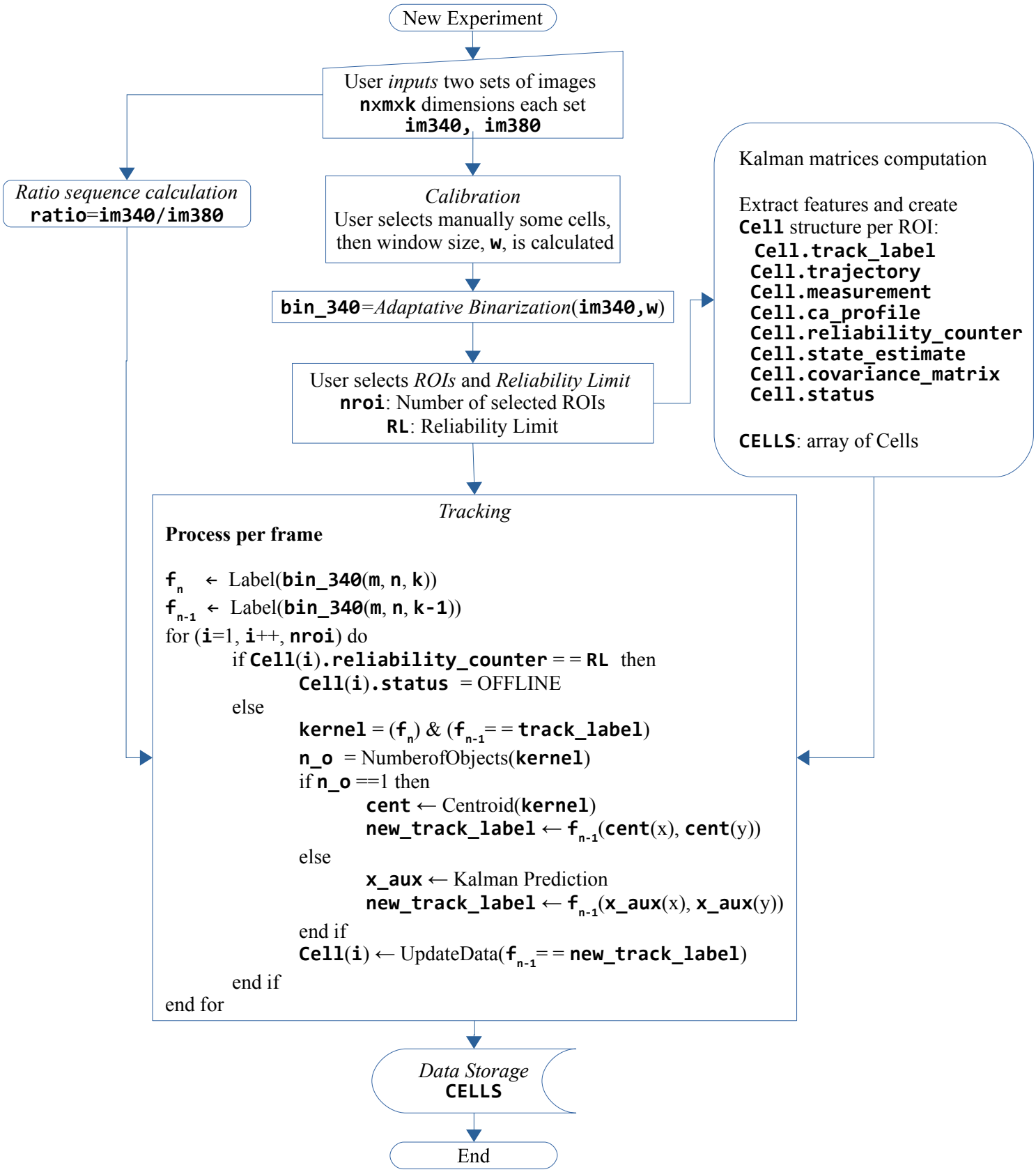
New Experiment
User *inputs* two sets of images
nxmxk dimensions each set
im340, im380
Ratio sequence calculation
ratio=im340/im380
Calibration
User selects manually some cells, then window size, w, is calculated
bin_340=*Adaptative Binarization*(im340,w)
User selects *ROIs* and *Reliability Limit*
nroi: Number of selected ROIs
RL: Reliability Limit
Kalman matrices computation
Extract features and create Cell structure per ROI:
Cell.track_label
Cell.trajectory
Cell.measurement
Cell.ca_profile
Cell.reliability_counter
Cell.state_estimate
Cell.covariance_matrix
Cell.status
CELLS: array of Cells
Tracking
Process per frame
f_n ← Label(bin_340(m, n, k))
f_{n-1} ← Label(bin_340(m, n, k-1))
for (i=1, i++, nroi) do
if Cell(i).reliability_counter = = RL then
Cell(i).status = OFFLINE
else
kernel = (f_n) & (f_{n-1}= = track_label)
n_o = NumberofObjects(kernel)
if n_o ==1 then
cent ← Centroid(kernel)
new_track_label ← f_{n-1}(cent(x), cent(y))
else
x_aux ← Kalman Prediction
new_track_label ← f_{n-1}(x_aux(x), x_aux(y))
end if
Cell(i) ← UpdateData(f_{n-1}= = new_track_label)
end if
end for
Data Storage
CELLS
End