```
X = all the coordinates of all the entities (isoforms and reads)
sort X (radix sort; for equal values, isoform coordinates come first)
for x in X do
  e = entityFor(x)
  if x is an entity end then
    sig = signature[e]
    gap = getLastGap(sig)
    if x is an isoform end then
      currentIsoformsForGap[gap].remove(e)
    else if x is a read end then
      isoforms = currentIsoformsForGap[gap].keepOnlyMatching(sig)
      if read e is the second read in the pair then
        isoformsForRead[e] = isoformsForRead[e]∩ isoforms
      else
        isoformsForRead[e] = isoforms
      end if
      readClasses[isoformsForRead[e]].add(e)
    end if
    signature.remove(e)
  else
    signature[e].add(x)
  end if
  if x is an exon start then
    sig = signature[e]
    lastButOneGap = getLastButOneGap(sig)
    currentIsoformsForGap[lastButOneGap].remove(e)
    lastGap = getLastGap(sig)
    currentIsoformsForGap[lastGap].add(e, sig)
  end if
end for
```