### Track Monitoring

**Monitoring Module**
- Validation of each $a_i \rightarrow b_j$
- Mitotic?
- Lost?
- New?
- Active?

**Optimized track**
- Measurement association $a_i \rightarrow b_j$
- UNN track-measurement association $a_i \rightarrow b_j$

**Track Database**

<table>
<thead>
<tr>
<th>Track</th>
<th>Mitotic</th>
<th>Lost</th>
<th>New</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: (X,Y)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2: (X,Y)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3: (X,Y)</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4: (X,Y)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5: (X,Y)</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6: (X,Y)</td>
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<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Track Monitoring Update**

### Figure 4

**A**

- Frame stack
- Image processing and segmentation
- Motion Filter
- Unique nearest neighbour
- Optimized tracks
- Tracking Database

**B**

- Monitoring Module:
  - Validation of each $a_i \rightarrow b_j$
  - Mitotic?
  - Lost?
  - New?
  - Active?

- Optimized track:
  - Measurement association $a_i \rightarrow b_j$
  - UNN track-measurement association $a_i \rightarrow b_j$