I like to move it move it!  
Analysing first-aid instruction videos for moving a victim

ABSTRACT
Instructions, including first-aid instructions, are increasingly made available on video. We need methods for analysing instruction videos that:

- allow comparisons with their static counterparts which use text and pictures
- support experimentation to optimize their design.

In the PAT Project, we have developed an annotation system in ELAN (Version 5.2, 2018), using an existing annotation scheme for written first-aid instructions (Van der Sluis et al. 2017) to which film-specific annotation categories have been added. This poster presents how this annotation scheme can be used for a functional analysis of first-aid videos. We used a corpus with 15 videos from different organisations concerning first-aid procedures where a victim needs to be moved: Dragging (i.e. Rautek from the Ground, Rautek from a Car Seat) and Turning (i.e. Recovery Position, Prone-To-Supine Roll).

Our systematic annotation shows how features (e.g., voice-over text, use of stills, film techniques, and added elements) are used in various kinds of action presentations and offers directions for future experiments with viewers and users in actual training situations to test their functionality.

RESEARCH QUESTION
How are language, image, and sound used in first-aid instruction videos about dragging and turning victims?

METHOD
- Development of annotation scheme based on Borger (2018)
- Implementation in ELAN 5.2
- Pilot Study to validate the annotation scheme
- Corpus selection (15 videos: 7 for Dragging and 8 for Turning)
- Corpus annotation with control and reconciliation cycles by two annotators
- Quantitative and qualitative corpus analysis (ongoing)

CORPUS

![Screenshot of annotation in ELAN](image1)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Video ID</th>
<th>Organisation</th>
<th>Length (min:sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dragging</td>
<td>1 Rautek from the ground</td>
<td>Rode Kruis Vlaanderen</td>
<td>00:40</td>
</tr>
<tr>
<td></td>
<td>2 Rautek from a car seat</td>
<td>Rode Kruis Vlaanderen</td>
<td>00:51</td>
</tr>
<tr>
<td></td>
<td>3 Oranje Kruis</td>
<td>Human Drive</td>
<td>01:28</td>
</tr>
<tr>
<td></td>
<td>4 Human Drive</td>
<td></td>
<td>01:09</td>
</tr>
<tr>
<td></td>
<td>5 Rode Kruis Vlaanderen</td>
<td></td>
<td>01:30</td>
</tr>
<tr>
<td></td>
<td>6 Oranje Kruis</td>
<td>Uitgeversgroep</td>
<td>01:40</td>
</tr>
<tr>
<td></td>
<td>7 Uitgeversgroep</td>
<td></td>
<td>00:57</td>
</tr>
<tr>
<td></td>
<td>8 Rode Kruis Vlaanderen</td>
<td></td>
<td>01:05</td>
</tr>
<tr>
<td></td>
<td>9 Oranje Kruis</td>
<td>Human Drive</td>
<td>01:48</td>
</tr>
<tr>
<td></td>
<td>10 Human Drive</td>
<td></td>
<td>01:03</td>
</tr>
<tr>
<td></td>
<td>11 Uitgeversgroep</td>
<td></td>
<td>01:38</td>
</tr>
<tr>
<td></td>
<td>12 Prone-To-Supine Roll</td>
<td>REHBO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13 Oranje Kruis</td>
<td>Human Drive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14 Prone-To-Supine Roll</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 REHBO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL: 09:15

RESULTS

![Graph showing analysis](image2)

- **Action Types**
  - Preparatory Action
  - Core Action
  - Closing Action

- **Action Status**
  - Obligatory
  - Conditional
  - Alternative

- **Control Information**
  - Warning
  - Condition
  - Purpose
  - Manner
  - Advice
  - Situation

- **Image Techniques**
  - Still
  - Snap Shot
  - Pan
  - Tilt
  - Zoom In
  - Zoom Out
  - Fade In
  - Fade Out
  - Split Screen
  - Transition

- **Added Elements**
  - Logo
  - Arrows
  - Lines
  - Symbols

- **Sounds**
  - Any talk by participants or devices in the scene

SPECIAL TECHNIQUES

- **Shot Size**
  - Close Up
  - Middle Shot
  - Long Shot
  - Undecidable

- **Number of Persons**
  - Zero
  - One
  - Two
  - Three
  - More than Three

- **Image Technique**
  - Still
  - Snap Shot
  - Pan
  - Tilt
  - Zoom In
  - Zoom Out
  - Fade In
  - Fade Out
  - Split Screen
  - Transition

- **Control Information**
  - Warning
  - Condition
  - Purpose
  - Manner
  - Situation

- **Action Status**
  - Obligatory
  - Conditional
  - Alternative

FINDINGS SO FAR

- **Action Types**
  - The number of preparatory and closing actions depends on the task; they are presented in text and in image.

- **Action Status**
  - We found hardly any conditional or alternative actions.

- **Action Aspect**
  - Most action presentation concern the action itself (process); in the images, we also find some result presentations (often in addition to a prior process presentation).

- **Control information**
  - Most types of control information occur only in text; only Manner and Situation Sketch occur in the images.

- **Image Techniques**
  - A variety of image techniques are used to present control information (e.g. Split Screen, Lines) or to aid the flow of the video (Transitions between shots).

REFERENCES

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Multimodal instructions, Instructional video, Video analysis, Annotation scheme, Procedure, First-aid.