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Powered Two Wheeler Integrated safety

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Author(s) and Partner name	Rachel Grant, Richard Frampton, Judi Weller and Stewart Humby, VSRC, LU Mike McCarthy, Vincent StClair and Camilla Halewood, TRL
Co-author(s) and Partner name	Steffen Peldschus and Erich Schuller, LMU
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Executive Summary

Task 2.2.2 of the PISa project was originally intended to include an analysis of existing junction video footage and in-depth case ride/drive through footage and report this analysis in Deliverable D11. In reality it was only possible to review video footage from in-depth accident cases where video footage either already existed or was recorded specifically for the PISa project.

In the PISa analysis the video was used to clarify the circumstances of the crash as interpreted by the review group from the case summary and supporting information. It was also possible to use the video to verify some of the variables recorded in the case information and in some cases, make general estimates of distances and angles of approach. It was also possible to consider lines of sight of both the rider and driver. The video was also helpful in considering the alternative actions and outcomes that may have been possible in each crash situation. As a consequence the video analysis was used to enhance the understanding of each in-depth crash case. It was not the intention in Task 2.2.2 to develop a systematic analysis plan to be used for each case in order to determine crash variables which were not already known. However, as part of the review process those cases of particular interest and sufficient level of detail were identified for further consideration in Task 3.1.1.

In total, 48 of the 60 in-depth cases had associated video footage which was included in the case review process. This video footage was either available with the original case material or collected as part of Task 2.2.2.

In addition to the case and video analysis undertaken in Workpackage 2 it was intended that the case information would be made available to other Workpackages in PISa in Deliverable D15: Detailed case summaries and associated video footage. However, due to issues of confidentiality of the data, it was decided by the partners responsible for OTS data that the actual case materials should remain with the host organisations and be made available to other partners in PISa upon request. As a consequence, summary information is given in each of the tables to enable partners to identify cases of interest.

As a consequence of these changes to the outputs of WP2 the deliverables 11 and 15 have been combined in this one report D11&15: Report summarising the in-depth accident case and video analysis.

1 Introduction

The original brief of the PISA project for Task 2.2.2 included two activities as stated below:

Task 2.2.2 Junction video data

Previously recorded video footage of junctions will be analysed. This video footage has been recorded either where accidents are known to happen or where specific accidents have occurred. As there are not many motorcycle related collisions to be expected in this database, a selection will be made of the video material for extracting conflicts with at least one motorcycle involved.

TRL and VSRC will analyse the video footage that accompanies each of the OTS in-depth cases selected. This includes exposure and ride through video footage from the perspective of the rider. In some cases it may be necessary to collect supplementary video footage using TRL's equipped motorcycle or equivalent means. LMU will undertake retrospective analysis of crash videos to make an analysis of risk.

During the negotiation phase of the PISA project TNO withdrew from Task 2.2.2. TNO had planned to undertake the first of the two activities, the analysis of existing video footage of junctions, and included the text describing this activity. Unfortunately, this text was not removed from the final Description of Work (DoW) and the remaining partners were not able to undertake this first activity of Task 2.2.2. As a consequence, the video analysis included only the second activity, namely the in-depth case video material.

As stated in the DoW, the video material from the UK On-The-Spot study (OTS) includes exposure and ride through footage. The exposure footage was recorded for a specific period of OTS Phase 1 and thus is available only for the in-depth cases occurring during this period. During the first review of all of the OTS cases and the process of defining the case selection criteria in Task 2.2.1 it was decided that, due to their more comprehensive nature, cases would only be drawn from Phase 2 of OTS. As a consequence no exposure video footage was available for analysis in PISA.

During the review and selection of in-depth cases from Phase 2, as anticipated, some of the cases were found not to have supporting ride-through video footage. For those cases selected for detailed review every effort to record both PTW ride-through and 'other vehicle' drive-through video footage was made.

Ride-through video is recorded in OTS to assist in the coding of the accident case information. Specific details of the accident location, which were recorded in the forms and notes of the case, can be visually confirmed after the scene has been left. However, it is not always possible to recreate the precise lines and speed of travel which occurred in the accident therefore it must be appreciated that the ride-through video is not a true reproduction of the pre-crash circumstances. The use of this video footage in the PISA analysis must therefore be clarified. In the PISA analysis the ride-through video was used to clarify circumstances of the crash as interpreted by the review group from the case summary and supporting information. It was also possible to use the video to verify some of the variables recorded in the case information and in some cases, general estimates of distances and angles of approach were made. It was also possible to consider lines of sight of the rider and driver respectively. The video was also helpful in considering the alternative actions and outcomes that may have been possible in each crash situation. As a consequence the video analysis was used to enhance the understanding of each in-depth crash case. It was not the intention in Task 2.2.2 to develop a systematic analysis plan to be used for each case in order to determine crash variables which were not already known. However, as part of the review process those cases of particular interest and sufficient level of detail were identified for further consideration in Task 3.1.1.



In addition to the case and video analysis undertaken in Workpackage 2 it was intended that the case information would be made available to other Workpackages in PISA in a restricted Deliverable D15: Detailed case summaries and associated video footage. However, due to issues of confidentiality of the data, it was decided by the partners responsible for OTS data that the actual case materials should remain with the host organisations and be made available to other partners in PISA upon request.

As previously stated, it was not the intention in Task 2.2.2 to develop a systematic analysis plan to be used for each case in order to determine crash variables which were not already known. However, as part of the review process those cases of particular interest and sufficient level of detail were identified for further consideration to be undertaken in Task 3.1.1. Thus for each in-depth case where video footage existed, the video footage was viewed after the details of the case had been explained, the accident scene and crash constellation examined, the characteristics of the vehicles and riders/drivers involved had been described and the injuries considered. When all of the available written information had been considered the video footage was watched several times, with the focus each time on a different aspect of the crash. This focus included the following, although not necessarily always in this order:

- The approach of the PTW rider and what they might have seen;
- The position of the PTW in the road environment;
- The situation of the other vehicle(s) (when relevant);
- The sequence of events as described in the case information, leading up to the impact, at the point of impact and post impact.

This process was also repeated for the drive-through video for the other vehicle where this was available.

Once a common understanding was agreed by the review team, the video was watched again several times in order to identify, discuss and talk through the possible alternative strategies that might have been adopted by the crash partners.

Ultimately, the consensus opinion that was obtained from the group watching the video was used in the process of determining the relevance and priority of each function in the case.

In total, 48 of the 60 in-depth cases had associated video footage which was included in the case review process.

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