Human-based solutions for open-doors train departure

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Introduction

Focus of the study

- Subject:
  - Open door train departures

- Issue:
  - Managing the risks of these events

- Investigation Methodology
  - Analysis of incidents reports details

- Plan presentation
The causes of open-door departures

Door-closing sequence
Types of errors detected

- Omission following an interruption (40%)

“I can’t believe how this kind of mistake could have happened, unless a driver in Torcy asked to get into the cab when the doors were closing. The door line being clear, I put the train in movement thinking they must have been closed.”

- Split of double capture (60%)

“I set my train in movement and (while conversing with the Regulations Officer), I realised that there was no double beep.”
The causes of open-door departures

**Comparison of the 2 causes of open-door departure**

<table>
<thead>
<tr>
<th>Origin</th>
<th>Break in sequence</th>
<th>Attention focusing</th>
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</thead>
<tbody>
<tr>
<td><strong>Origin</strong></td>
<td>Unexpected</td>
<td><strong>Attentional capture</strong></td>
</tr>
<tr>
<td><strong>Type of occurrence</strong></td>
<td>Conscious</td>
<td>Unconscious</td>
</tr>
<tr>
<td><strong>Perception level during the occurrence</strong></td>
<td>Perceptible</td>
<td>Imperceptible</td>
</tr>
</tbody>
</table>
To manage the unexpected interruption

2 practices

“No interruptions”

“Start from scratch”

Limitations

Not always possible

Inefficient if driver convinced that he closed the doors
Reinforcing self-control

① Before interrupting: Verbalizing

② Before recommencing: “2-second stop”

Sensitizing drivers on human errors
Actions prospects

**Acting on sources of distraction**

- Cab access
- Cab behaviour rules
Thank you for your attention!