



Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada



Voice and video recorders: Usage, rights, and obligations

Faye Ackermans

Member, Transportation Safety Board of Canada

Toronto, Ontario 12 May 2016

Canada

Recommendation R03-02

That the Department of Transport, in conjunction with the railway industry, establish comprehensive national standards for locomotive data recorders that include a requirement for an on-board cab voice recording interfaced with on-board communications systems



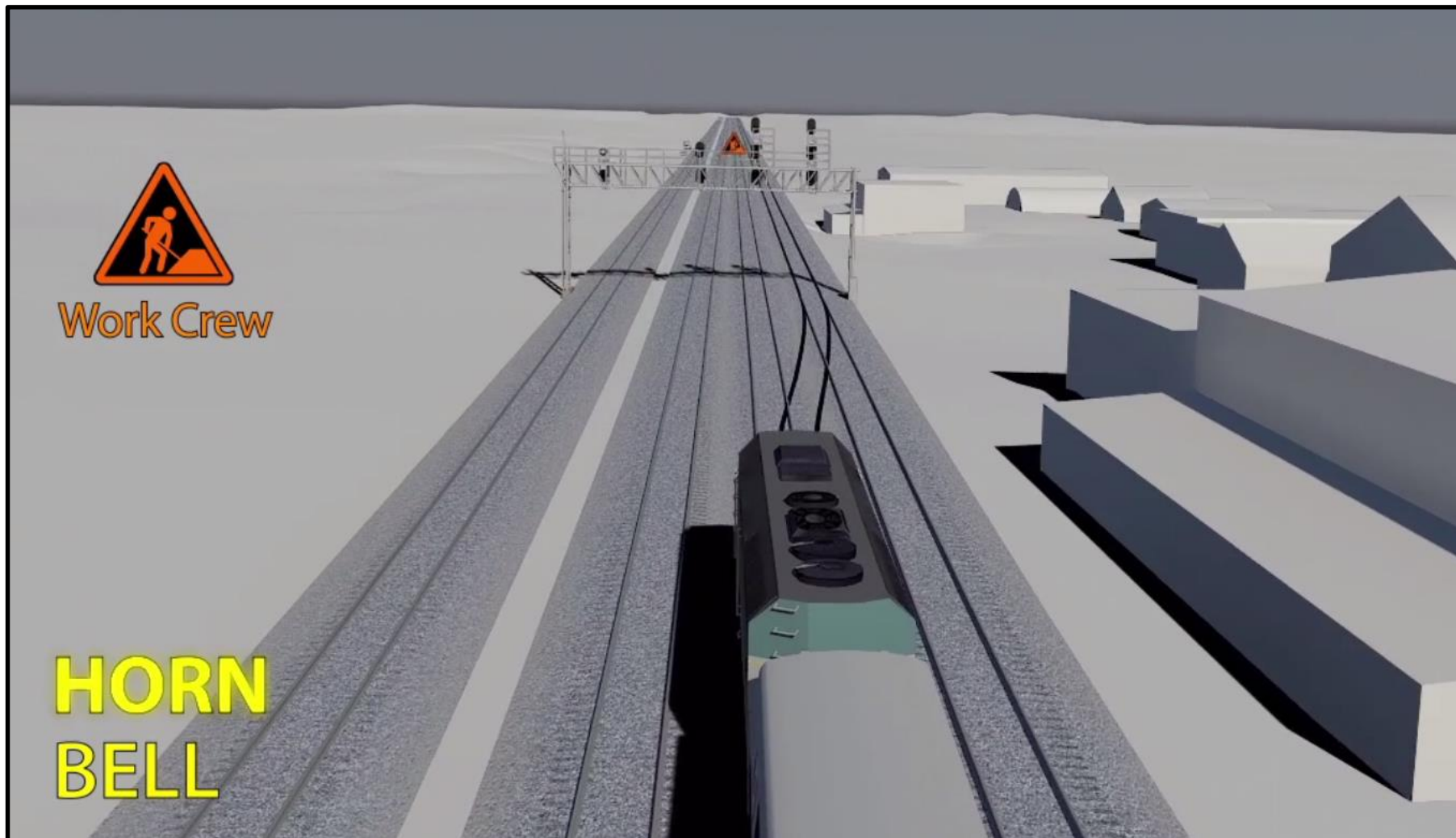
Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada

TSB investigation report R99T0017

The signals worked as intended. So how were they missed?






Work Crew

**HORN
BELL**



Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada

Recommendation R13-02

That the Department of Transport require that all controlling locomotives in main line operation be equipped with in-cab video cameras



Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada

TSB investigation report T12T0038 (Burlington)

Use of on-board recordings

TSB investigations:

- Data recorders only tell us “what” happened.
- LVVR is essential to fully understanding the “why.”
 - Sequence of events
 - Crew actions and interactions



Watchlist 2012 & 2014

On-board voice and video recorders

- With no requirement for on-board voice and video recorders on locomotives, key information needed to advance railway safety may not always be available.
- Communications and interactions in locomotive cabs need to be recorded.
- The TSB is committed to working with the regulator and the railway industry to explore ways of making progress on this issue.



LVVR safety study – project tasks

Project Tasks	Sub-Tasks
A. Technology assessment	<ul style="list-style-type: none">• Experience from the US• Experience from the other modes• Current Canadian experience• Common / best Practices - technology
B. Legislative & regulatory assessment	<ul style="list-style-type: none">• Applicable acts and regulations• Privacy concerns• Other legal issues• Implications for other modes
C. Operational / human factors assessment	<ul style="list-style-type: none">• Checklist for assessing on-board recordings• Triage and detailed assessments• Common / best practices – operational• Potential to evaluate human factors
D. Safety benefits assessment	<ul style="list-style-type: none">• Benefits for TSB investigations• Benefits for proactive safety management



Current technology / experience

Current Experience	Preliminary Observations
Experience from the US	<ul style="list-style-type: none">• Freight railroads• Passenger / commuter railroads• Federal Railroad Administration• NTSB
Experience from the other modes	<ul style="list-style-type: none">• Aviation: CVRs• Marine: VDRs
Canadian experience	<ul style="list-style-type: none">• Locomotive Event Recorders• Forward-facing video• On-board voice & video recorders• On-board voice recorders• On-board video recorders



Checklist for assessing on-board recordings

A. Crew information	<ul style="list-style-type: none">• Number of people in cab• Role of each crew member• Crew interaction• Crew Resource Management
B. Capturing elements of human performance	<ul style="list-style-type: none">• Stress• Level of alertness• Workload• Situation awareness• Distraction / inattention
C. Locomotive controls	<ul style="list-style-type: none">• Coverage area• Numerical readouts / position• Inputs from crew members• Responding to alarms
D. Non-normal situations	<ul style="list-style-type: none">• External detectors / alarms• Emergency / non-standard radio communications



Status of the current legislation

- Under the *Canadian Transportation Accident Investigation and Safety Board Act (CTAISB Act)*, on-board recordings are privileged.
- TSB may use on-board recordings in its investigations.
- Only a few other uses are permitted (e.g., coroners).
- A court may order the disclosure under certain circumstances.
- *CTAISB Act* specifically prohibits use of recordings against workers in disciplinary, legal or other proceedings.



Looking ahead

- Society has changed since the *CTA/ISB Act* was proclaimed in 1990.
- There are cameras everywhere.
- There are potential safety benefits to be derived from the broader use of on-board recordings by operators and regulators.
- However, there are a number of competing interests that must be considered before changing the legislation and the rules.



Balancing rights and obligations



Workers

Rights

- *Charter of Rights and Freedoms*
- Privacy
- Trust and respect
- Fair and equitable treatment
- Collective agreements

Obligations

- Compliance with laws, regulations, and rules
- Compliance with company policies, and procedures
- Exercise due diligence
- Duty of loyalty to employer



Operators / companies

Rights

- Define policies and procedures
- Manage operations and supervise employees
- Take corrective actions, including discipline

Obligations

- Compliance with laws, regulations, and rules (Canadian and international)
- Respect the rights of workers
- Collective agreements
- Effectively manage safety risks
- Take corrective actions
- Exercise due diligence
- Accountability to shareholders



Government, regulators, and the TSB

Rights

- Make laws, regulations and rules
- Monitor, inspect, and audit to ensure compliance
- Investigate
- Take corrective actions, including imposing penalties

Obligations

- Compliance with laws, regulations, and rules (Canadian and international)
- Respect the rights of workers and companies
- Ensure proper oversight
- Take corrective actions
- Exercise due diligence
- Be accountable to the public



Third parties

Rights

- Access to information
- Fair trial in all types of litigation
- Proper administration of justice
- Government accountability

Obligations

- Compliance with laws and regulations
- Respect the rights of individuals and organizations



Questions

- What is the definition of an on-board recorder?
- What / who can be recorded?
- Who can have access to the recordings?
 - internally?
 - externally
- What use can be made of the recordings?
 - internally?
 - externally
- How long are the recordings retained?



Questions (continued)

- How can the rules be enforced, and who will enforce them?
 - internally?
 - externally?
- How do we respond to criminal investigations / prosecution and civil litigation issues?
- How do we reconcile with different laws, regulations, and rules in other countries?
 - Canadian workers and/or companies abroad
 - foreign workers and/or companies in Canada



Conclusions

- We all have some thinking to do to prepare and be ready.
- No easy answers to any of these questions.
- Once the door is opened, it will be very difficult to close.
- Need to do it right the first time.



Canada

