



**SMART-TRANSPORTATION DIVISION**

**BEFORE THE U.S. DEPARTMENT OF TRANSPORTATION**

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**FEDERAL RAILROAD ADMINISTRATION**

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**FRA 2016-0002-N-22**

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**January 3, 2017**

These comments are on behalf of the Transportation Division of the International Association of Sheet Metal, Air, Rail and Transportation Workers (SMART). The SMART Transportation Division, formerly the United Transportation Union, is an organization representing approximately 125,000 transportation employees with active rail members working in all operating crafts including engineers, conductors, trainmen, switchmen and yardmasters.

This is in response to the issue of in cab distractions as outlined in the public notice in FRA docket FRA 2016-0002-N-22.

We have been concerned about the increase of in-cab distractions for some time and have submitted letters and comments to the FRA with our concerns. Two examples are Trip Optimizer and Leader, which are computer-generated devices located in locomotive cabs that are allegedly being used to save fuel. These interactive devices force the engineer to constantly look away from the track ahead and instead, compels the engineer to focus on the in-cab computer screen. The big four freight railroads force crew members to use either Leader or Trip Optimizer—and this use is causing far greater distractions than a personal cell phone would. Please see the letters, attached.

In addition, PTC implementation is causing greater cab distractions than we had hoped it would. Instead of the PTC system simply stopping trains when necessary, they are constantly messaging the engineer to take some minor corrective action and requiring the engineer to interact immediately, which takes the crews' focus off the track ahead and on the cab electronic device. To remedy this, each locomotive should have two PTC screens so that the conductor is able to interact with the PTC system, allowing the engineer to better focus on the track ahead.

Regarding a heads-up display—rather than radio communications, we are concerned that this would be yet another electronic devise that takes the crew members eyes off the track. At least with radio communications, the crew can continue to look out at the track ahead while talking on a radio.

Alternative ways to deal with in-cab distractions are as follows:

1. Issue the pending rule on crew size and require all trains to have at a minimum one certified conductor and one certified engineer in each locomotive cab. This is the single most effective way to assure that cab distractions do not result in an accident.
2. Radio congestion is a problem throughout the railroad industry. Ways to mitigate the constant bombardment of the radio in the locomotive cab is to limit access by others to radio channels that trains use. This problem can be further mitigated by assigning different radio channels to yard operations and road operations, and by assigning different radio channels for different line segments and crafts.
3. Wayside detectors should, for the most part, be for reporting only. Meaning, they would be only used to report to the train if there is a defect. While some railroads already have report-only detectors, most railroads allow these detectors to constantly blare out that a

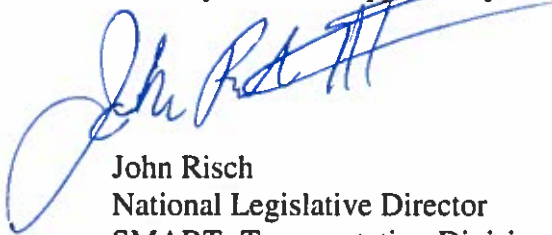
passing train has no defects, oftentimes blocking our all other radio communications. This is tantamount to having your home smoke detector going off every hour proclaiming that there is no fire. There should be exceptions to report-only detectors. For example, allow the first detector of a train leaving a terminal to always broadcast so that the train crew can receive real-time notice of the trains' axel count to make sure they have the right number of cars in their train, as listed on the train manifest report.

4. Investigate the distractions caused by Leader and Trip Optimizer and either prohibit their use or find ways to dramatically reduce the distractions they are causing the engineer.
5. Increase oversight on the implementation of PTC. Insist that PTC screens are properly located so that either crew member can interact with the PTC screen and limit the amount of distractions PTC inflicts on the crew. PTC should stop trains when necessary, not nitpick every notch of the throttle.

One last point: We are the largest railroad labor union representing operating employees in the country, in an industry that is 85% organized. In-cab distractions are a grave concern to us and we have alerted the FRA in the past about our concerns, as you can see in the attached letters. That being said, no one from the FRA has responded to our concerns, nor has anyone from the FRA interacted with us prior to this notice being filed.

Please consider our expertise on how things work inside the locomotive cab as a resource to FRA. We stand ready to help make train operations safer, but we need solutions that work—not reactions to a single incident.

Thank you for the opportunity to comment.

A handwritten signature in blue ink, appearing to read "John Risch", with a large, sweeping flourish extending to the left.

John Risch  
National Legislative Director  
SMART- Transportation Division



Washington Legislative Office

# Transportation Division

304 PENNSYLVANIA AVE S.E., WASHINGTON, DC 20003-1147  
PHONE 202-543-7714 • FAX 202-544-3024 • www.utu.org

JOHN PREVISICH  
President

JOHN RISCH  
National Legislative Director

January 21, 2016

Mr. Robert Lauby  
Associate Administrator for Safety  
Federal Railroad Administration  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Mr. Lauby:

I am writing on behalf of the Transportation Division of the International Association of Sheet Metal, Air, Rail and Transportation Workers to express our concerns about the use of auto control systems such as Union Pacific Railroad's use of Locomotive Engineer Assist/Display & Event Recorder (LEADER) and BNSF's use of Trip Optimizer. It is our view that these technologies are dangerous distractions to operating crews and should be regulated by the Federal Railroad Administration (FRA), just as the use of cell phones and interaction with Positive Train Control (PTC) systems currently are. I respectfully ask that you issue an emergency order prohibiting the use of these technologies until they are further examined to ensure that they do not pose risks to the safe operations of freight railroads.

One needs to look no further than the FRA final rule found at 49 CFR Part 220 – originally FRA Emergency Order 26 issued in October of 2008 – which governs the use of cell phones and other personal electronic devices by operating employees, to find justifications for why an emergency order should be issued. The rule states that “a railroad operating employee shall not use an electronic device if that use would interfere with the employee's or another railroad operating employee's performance of safety-related duties.” We believe that this same standard is violated by LEADER and Trip Optimizer systems. One would be hard pressed to find a more critical safety-related duty than operating a 12,000 ton train – potentially containing hazardous materials – at 70 mph. A computer screen that repeatedly beeps and flashes, distracting a crew member's attention from the road ahead, poses serious risks.

The rule defines an *electronic device* as “an electronic or electrical device used to conduct an oral, written, or visual communication; place or receive a telephone call; send or read an electronic mail message or text message; play a game; navigate the Internet; navigate the physical world; play, view, or listen to a television broadcast; play or listen to a radio broadcast other than a radio broadcast by a railroad; play or listen to music; execute a computational function; or, to perform any other function that is not necessary for the health or safety of the person and that entails the risk of distracting the employee or another railroad operating employee from a safety-related task.”

While the rule states that the definition of *electronic device* does not include “electronic control systems and information displays within the locomotive cab,” we strongly believe that it should. Interacting with LEADER and Trip Optimizer systems is not principally a safety-related task for an operating crew member, but rather a mechanism to reduce fuel and operating costs through increased efficiency. Interacting with these systems certainly does entail the risk of distracting the engineer from the safety related-task of operating a locomotive.

Furthermore, we believe that monitoring auto control systems like LEADER is at least as intrusive and distracting as requiring the engineer to interact with Positive Train Control (PTC) systems, which the FRA’s finale rule on PTC implementation specifically prohibits (49 CFR 236.1006). We have heard from many of our members that these systems are often positioned directly to the left of the engineer, such that he is facing the conductor while responding to the system’s prompts. This interferes with the engineer looking out the window to observe proper whistling of crossings, track defects, trespassers, unannounced yellow boards, red boards, red/yellow boards, diverging route signals, etc. If such systems were only advisory programs, we might be able to excuse their use, but railroads, such as Union Pacific and BNSF, mandate that engineers follow prompts under the threat of discipline.

If the safety risks of directing the engineer’s attention away from the track ahead, and instead toward the automatic control system, were not already clear enough, the situation becomes even more dire when you consider that railroads require – again under the threat of discipline – that the engineer record and report all exceptions to the operation of systems like LEADER upon tie-up. For example, if a system’s prompts are suspended, the engineer must record when it was suspended, how long it was suspended and when it resumed. Since it is unreasonable to expect the engineer to remember the mile pole locations, speed and other particulars of each occasion in which the system is suspended, it is necessary to write these facts down as the train is moving. However, as you know current rules and regulations prohibit an engineer from copying mandatory directives on moving locomotives.

Based on the experience of our members, suspension of these systems is common. For example, ATC restrictions, which are encountered numerous times on every trip, require these systems to be suspended; when trains are sorted and sent on diverging routes, the system must be suspended; when special speed restrictions are issued by the foreman in charge of a Form B work order, the system must be suspended; and when these systems require train handling instructions contradictory to how the engineer feels the train should be properly handled, he or she must decide whether to follow its directives or suspend the system and run the train the way they think is safest. In all of these instances, the specifics of each suspension must be reported upon tie-up.

January 21, 2016  
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Once again, in the interest of safety, I respectfully ask that the FRA issue an emergency stop order of LEADER, Trip Optimizer and other similar auto control or advisory control locomotive operating systems. The order should remain in place until railroads that require their use can prove that these systems have been properly vetted and are no more distracting than PTC systems, which engineers currently cannot be required to interact with while a train is moving.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John Risch". The signature is written in a cursive style with a long, sweeping horizontal line extending to the right.

John Risch  
National Legislative Director



Washington Legislative Office

# Transportation Division

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JOHN PREVISICH  
President

JOHN RISCH  
National Legislative Director

May 26, 2016

Mr. Robert Lauby  
Associate Administrator for Safety  
Federal Railroad Administration  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Mr. Lauby:

The recent NTSB findings show that radio distraction was the likely cause of the terrible Philadelphia Amtrak crash which prompts me to write you this letter.

Overloaded radio communications are happening all over the country, and some railroads are making things worse by requiring needless radio broadcasts by train crew members. This further congests the radio airways and creates constant distracting noise in locomotive cabs. For example an already big problem is now being exasperated on the Canadian National Railroad. A copy of their most recent directive for "Broadcasting of Restrictions" is attached. Places where there is too much radio traffic impairs the ability of train crew members to communicate effectively with roadway workers, dispatchers, and other train crews causing safety issues. We have reports from members who say they have lost situational awareness because of the constant blaring of the locomotive radio and I can attest that it has happened to me.

Wayside detectors that report after every train crosses them also contributes to radio congestion, and most of these detectors have such a strong signal they override all other communications. We now recommend to FRA, and have recommended to some railroads, that detectors only broadcast over the radio when a defect is found, just like a home smoke detector does. There should be some exceptions to this recommendation such as allowing the reporting of a train's axle count at the first detector outside a terminal.

Some of the effects of radio congestion are:

- All or part of a message is not received;
- A crew does not act on instructions intended for them;
- A crew acts on instructions intended for another train;
- Unacceptable delay in establishing contact with or relaying a message;
- The workload of the dispatcher and crew is increased due to the need to resolve the confusion that leads to radio congestion.

Another problem occurs when railroads operating procedures require changing radio channels. This was a contributing factor in the Casselton, ND oil train accident two years ago. Crews can miss an important message when they change channels. CN requires in its rule 411 that crew members contact the train dispatcher when whistling in a quiet zone, which most often occurs due to other rules in place for whistling for Roadway Workers and E-testing by CN managers. When a crew has to change to a different radio channel to contact a dispatcher they sometimes have to wait 10-15 minutes for a dispatcher to answer their radio.

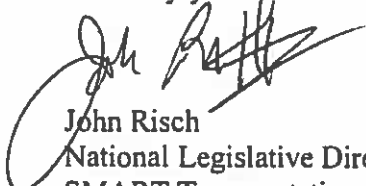
Even more bizarre is that some railroads require that every block signal be called out over the radio, even ones that are clear--- a ridiculous and congesting requirement.

Those who are writing these radio rules are doing so because they actually believe that these requirements will make things safer, when in reality the opposite is occurring.

I'm bringing this to your attention now because, clearly there is a problem out there and the NTSB has it on their radar. I believe there could be some modest changes to railroad operating rules that would greatly reduce radio congestion, and we have asked railroads many times to do so, but unfortunately we have made no progress.

I respectfully request that we meet with FRA, with or without the railroads, and discuss this problem.

Sincerely yours,



John Risch  
National Legislative Director  
SMART Transportation Division

CC: John Previsich, SMART-Transportation Division, President  
John Tolman, Brotherhood of Locomotive Engineers & Trainmen National Legislative Representative  
Greg Hynes, SMART-Transportation Division Alternate National Legislative Director  
Vince Verna, Brotherhood of Locomotive Engineers & Trainmen, Director of Regulatory Affairs



  
SOUTHERN REGION  
Operating Practices Department

Homewood, IL  
May 2, 2016

SYSTEM OPERATING BULLETIN NO. 9  
ALL CONCERNED:

SOUTHERN REGION  
ALL DIVISIONS

Make the following changes to CN U.S. Peer to Peer Guidelines, First Edition.

Page 1

CHANGE TITLE and Content in item 5, Advance Warning of Restrictions, to read:

**5. ADVANCE BROADCAST OF RESTRICTIONS**

Crew members in the cab of the controlling locomotive must communicate to each other of all restrictions, in sufficient time, to ensure compliance.

Except when switching, in an emergency, or when movement is traversing or within 150 feet of a defect detector a broadcast by a member of the crew must be made to the airwaves when:

1. Entering the main track and at each mile post location ending in (5) stating any restriction(s) from that mile post to the next milepost ending in (5). If more than 2 restrictions fall within this 10 mile area just state "Multiple Restrictions", or if NO restrictions just broadcast "No Restrictions". All broadcast must include designation (initial and number of locomotive), direction and specific track (at multiple main track locations).

"Restriction" refers to any of the following:

- Planned Work, (USOR 1102)
- Speed Restriction, (USOR 1103)  
Note: *Transmission NOT required when train's authorized speed is equal to or less than speed restriction approaching.*
- USOR 529 (A, B or C)
- Track Authority when:
  1. Switch warning identified in box 9,
  2. Approach to end of limits identified by either box 2 or 6, or
  3. Joint with identified by box 8

**Examples:**

"CN 5600 North, MP 125, Rule 1102 at MP 133, Rule 1103 at MP 134, out"  
"CN 5600 North, MP 135, 529A at MP 139.4, "joint with" limits with EIC Jones at MP 142, out"  
"CN 5600 North, MP 145, Multiple Restrictions, out"  
"CN 5600 North, MP 155, No restrictions, out"  
"CN 5600 North, MP 165, Switch Warning, Box 9, at MP 170.9, out"  
"CN 5600 North, MP 175, end of Track Authority Limits, MP 184, out"

2. Passes a signal at a control point or at a signal that is the approach to a control point that requires:
  - a. being prepared to stop at the next signal,

- b. being prepared to pass the next signal at Restricted Speed, or
- c. Restricted Speed.

**3. Stops for a signal that requires stopping.**

Signals in items 2 and 3 are to be broadcasted when the signal is observed from the head end of the train and broadcast must include:

- 1. Initial & Engine number,
- 2. Direction, location, and
- 3. Signal name

**NOTE:** In all cases, if movement is traversing or within 150 feet of a defect detector, DO NOT make a radio transmission until the entire train has passed, and message received.

**Signed: J. L. Whitt – Senior Manager Operating Practices**  
Operating Bulletins in effect: 1, 3-9

- If movement starts less than  $\frac{1}{4}$  mile from the crossing, signal may be sounded less than 15 seconds before entering the crossing when it is seen crossing gates are in the fully lowered position or no traffic is approaching, or traffic is stopped at the crossing.
- Prolong or repeat signal 410 (7) until the crossing(s) is completely covered.

**EXCEPTION:** Whistle signals 410(3) and 410(5) do not apply during switching movements.

Other forms of communication may be used in place of whistle signals, except signals 410(1), 410(6), and 410(7); and for passenger trains only signal 410(3)

For all required whistle signals (1) - (7), engineer must fully pull whistle handle or fully depress whistle button to ensure maximum warning is provided. Improper use of the whistle is prohibited.

If the whistle on the lead unit fails enroute, and no other unit can be used as the lead unit, ring the bell continuously approaching and passing stations, yards, and public crossings at grade. If the whistle on a trailing locomotive can be used, the conductor or other qualified employee will use that whistle under the direction of the engineer.

If no other whistle is available, stop the train before entering each public crossing, place a crew member on the ground at the crossing to provide warning until the crossing is occupied, unless:

- Crossing gates are in the fully lowered position, or
- No traffic is approaching, or traffic is stopped at the crossing.

**411. LOCOMOTIVE WHISTLE QUIET ZONES.** At locations designated in the timetable, whistle signal 410(7) must not be sounded for public grade crossings except when:

- Emergency or dangerous situations exist, or
- Rule 529 is in effect.

If Roadway Workers are on or near a crossing in a quiet zone, use whistle signal 410(6).

When the whistle is sounded, engineer must notify RTC with the following information:

- When,
- Where, and
- Why

All Locomotive Whistle Quiet Zones are in effect 24 hours unless otherwise noted in Timetable Instructions. Locomotive Whistle Quiet Zones that are not 24 hours must be equipped with both a standard Whistle sign and No-Whistle sign on each post.

**412. HEADLIGHTS.** Turn the headlight on bright to the front of every moving train. It may be turned off when the train is not moving. Engines working in yards will have headlight displayed at all times, however, it may be turned off on the end coupled to cars

Except when approaching and passing over a public crossing at grade, the headlight may be dimmed:

- Approaching or being approached by an opposing train or engine,
- Approaching stations where passengers are received or discharged.