



**American Train Dispatchers Association**

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September 6, 2006

Docket Clerk  
DOT Central Docket Management Facility  
Room PL-401  
400 7th Street, SW (Plaza Level)  
Washington, DC 20590-0001

Re: Docket Number FRA-2006-24840

Dear Docket Clerk:

Attached hereto please find the Joint Comments of the American Train Dispatchers Association, and the Brotherhood of Locomotive Engineers and Trainmen concerning the above-referenced matter.

Sincerely,

F. L. McCann  
President

Don M. Hahs  
National President

attachment

**Federal Railroad Administration**

**in re**

**DOT DMS Docket No. FRA-2006-24840**

**Joint Comments of**

**American Train Dispatchers Association**

**and**

**Brotherhood of Locomotive Engineers and Trainmen**

On May 4, 2006, Union Pacific Railroad Company (“UP”) filed with the Federal Railroad Administration (“FRA”) a petition for waiver from compliance with the requirements of 49 CFR Section 214.321(a)(1); the petition was assigned DOT DMS Docket No. FRA-2006-24840. *See* DOT DMS FRA-2006-24840-2 (hereinafter “Petition”). On July 27, 2006, FRA published notice that the petition had been filed, and that a 45-day comment period was being afforded to interested parties. 71 Fed. Reg. 42712-42713. The American Train Dispatchers Association is the duly designated collective bargaining representative, under the Railway Labor Act (45 U.S.C. §§ 151 et seq.) (“RLA”), for train dispatchers and rail traffic controllers at the vast majority of the nation’s rail carriers. The Brotherhood of Locomotive Engineers and Trainmen (“BLET”), a division of the Rail Conference of the International Brotherhood of Teamsters, is the duly recognized collective bargaining representative under the RLA for the class or craft of locomotive engineer employed by UP, all of whom are directly affected by the petition. For the reasons set forth below, ATDA and BLET respectfully request that FRA deny UP’s petition.

We begin with a brief restatement of UP’s petition. UP requested that — in order to implement what it terms “Remote Authority” technology — FRA “permanently suspend compliance with” 49 CFR Section 214.321(a)(1), which provides as follows:

**§214.321 Exclusive track occupancy.**

Working limits established on controlled track through the use of exclusive track occupancy procedures shall comply with the following requirements:

(a) The track within working limits shall be placed under the control of one roadway worker by either:

(1) Authority issued to the roadway worker in charge by the train dispatcher or control operator who controls train movements on that track ....

Petition at p. 1.

UP further “requests the FRA appoint a representative for the Remote Authority program who is empowered to review and approve all operating rules changes, training, criteria for knowledge and skill testing, field tests and procedures related to this program.” Id. According to the petition, “Remote Authority” is “a Web-based application that will permit authorized users to request, be granted or release Foul Time, Track Permit, Track & Time or Track Warrant authority to occupy a Main Track or other controlled track.” Id. Access to the program requires valid credentials consisting of a user name and password, and — for those accessing the system from somewhere other than UP’s computer network — a virtual private network connection. Id.

Once a request has been transmitted, a Remote Authority computer server will determine whether the requester is authorized to make such a request, and preliminarily determine whether the request “meets established criteria.” Id. at p. 2. If the request is valid and established criteria are met, the server will then determine whether to grant the request “without train dispatcher or control operator intervention” or place the request “in the appropriate authority request queue, and [notify] the train dispatcher or control operator.” Id.

The petition also declares UP's requirements for dispatching system issuance and release of on-track authority to be confidential and proprietary. Id. Hence, Appendix A to the petition, which purportedly sets forth said requirements, has not been made available in the public docket. Similarly, UP avers that dispatching system security requirements are safety sensitive information. Id. Thus, Appendix B to the petition, which purportedly describes those requirements, also has not been made available in the public docket.

UP states its intention to implement Remote Authority on a system-wide basis, and that “[a]ll Main Tracks, Sidings and other controlled tracks auxiliary to the Main Track shall be included in the scope of” Remote Authority. Id. at pp. 2-3. UP acknowledges that Remote Authority is intended “to permit the dispatching system to grant or release of on-track authority in response to a valid request from an authorized user without intervention on the part of the train dispatcher or control operator who controls train movements on that track.” Id. at p. 3.

In that section of the petition setting forth justification for the waiver, UP does nothing more than reiterate that it seeks to “permit authorized individuals to request, be granted or release their on-track authority without intervention on the part of the train dispatcher or control operator who controls train movements on that track.” Id. UP requests that the waiver become effective on July 1, 2006, but advises FRA that it may “test” various components of the system — excluding the automated processing of occupancy requests — at any time. Id. at p. 4. Lastly, UP claims that Remote Authority “will have no impact on operations and no adverse impact on the safety of train operations or on-track safety.” Id.

At the outset, we wish to state our complete agreement with preliminary comments filed by the Brotherhood of Maintenance of Way Employees Division of the Teamsters Rail Conference (“BMWED”) on August 10, 2006. *See* FRA-2006-24840-4. We find it simply incredible that UP would have the audacity to attempt to ramrod its waiver request *sub rosa*. With respect to the claim that UP’s requirements for dispatching system issuance and release of on-track authority are confidential and proprietary in nature, FRA has promulgated exacting requirements governing the issuing of authority to roadway workers under the full range of operating and work scenarios. *See, e.g.*, 49 CFR §§214.319–214.327. These requirements are in the public domain, and all railroads must comply therewith, absent a waiver.

Thus, there can be no legitimate basis for UP’s claim that its procedures for compliance with FRA regulations are confidential or proprietary. Accordingly, we echo BMWED’s request that the current 45-day comment period be suspended, pending publication of Appendix A to the petition, and that a new 45-day comment period begin upon Federal Register notice of the publication of Appendix A. How else can any interested party evaluate and critique, if necessary, UP’s specific plans?

We further believe the petition fails to conform to FRA Rules of Practice, which should cause FRA to deny it altogether. For example, UP failed to comply with the requirements of Section 211.7(a), which provides that a “petition for waiver must be submitted at least 3 months before the proposed effective date, unless good cause is shown for not doing so.” As previously noted, UP’s petition is dated May 4, 2006, and requests that relief be granted beginning July 1,

2006, less than sixty days later. *Supra*. The petition neither was submitted at least three months before the proposed effective date, nor set forth any rationale whatsoever — much less any evidence of good cause — why it should be granted in less than 60 days.

Further, UP failed to fulfill the requirements set forth in Section 211.9(c), which requires that a petition must

[c]ontain sufficient information to support the action sought including an evaluation of anticipated impacts of the action sought; each evaluation shall include an estimate of resulting costs to the private sector, to consumers, and to Federal, State and local governments as well as an evaluation of resulting benefits, quantified to the extent practicable. ***Each petition pertaining to safety regulations must also contain relevant safety data.***

49 CFR § 211.9(c) (emphasis added). No evaluation or quantification of benefits was provided, nor was any relevant safety data provided. Instead, UP does nothing more than invite an inference that its proposed “Remote Authority” system is, *per se*, safer than the current method of operation. This kind of “trust us” approach is wholly inconsistent with federal regulatory law.

Finally, one aspect of the relief sought by UP plainly contradicts FRA regulations. Section 211.41 mandates that the Railroad Safety Board shall have complete jurisdiction over all waivers implicating safety rules, regulations, or standards. However, UP’s petition proposes that FRA cede the mandatory and exclusive authority of the Railroad Safety Board by “appoint[ing] a representative for the Remote Authority program ***who is empowered to review and approve all operating rules changes, training, criteria for knowledge and skill testing, field tests and procedures related to this program.***” Petition at p. 1 (emphasis added).

To our knowledge, FRA has never contemplated, much less authorized, transferring to a single individual the Railroad Safety Board's obligation to oversee continuing compliance with conditions set forth in a waiver and to review what conditions may be appropriate for an extension of the waiver. Indeed, it is our belief that FRA lacks the jurisdiction to appoint a "remote authority czar," or any other "czar" for that matter, because such an action would be contrary to the plain language of Section 211.41. Accordingly, FRA must reject this aspect of the relief sought by UP, and the Railroad Safety Board should retain complete jurisdiction over the subject matter of the petition.

Without retreating from the above, UP's petition is facially insufficient in several respects. As previously noted, UP's proposed Remote Authority is described as a computer system that "permit[s] the dispatching system to grant or release ... on-track authority in response to a valid request from an authorized user without intervention on the part of the train dispatcher or control operator who controls train movements on that track." Petition at p. 3. The technology is, indisputably, a processor-based signal and train control system. Moreover, because Remote Authority is "a train control system using technologies not [currently] in use in revenue service" and has no "established history[y] of safe practice," it is by definition a "new or next-generation train control system." 49 CFR § 236.903. Consequently, the technology is subject to the requirements of 49 CFR Part 236, Subpart H, which sets forth governing standards for processor-based signal and train control systems.

Section 236.905 requires a railroad to submit a Railroad Safety Program Plan (“RSPP”) for FRA approval that must address, at a minimum, the following elements: (1) a preliminary safety analysis, including (a) a complete description of methods used to evaluate a system’s behavioral characteristics; (b) a complete description of risk assessment procedures, (c) the system safety precedence followed and (d) the identification of the safety assessment process; (2) the design for verification and validation; and (3) the human factors design; and (4) a configuration management control plan. 49 CFR § 236.905(b). Section 236.907 further requires a railroad to submit a Product Safety Plan (“PSP”), a formal document which describes in detail all of the safety aspects of the product, including but not limited to procedures for its development, installation, implementation, operation, maintenance, repair, inspection, testing and modification, as well as analyses supporting its safety claims. 49 CFR § 236.907(a).<sup>1</sup>

Earlier this year, UP submitted for FRA approval a RSPP, which was docketed as DOT DMS FRA-2006-24002. In May, BLET submitted joint comments with the United Transportation Union concerning the proposed RSPP. *See* FRA-2006-24002-3. On June 1, 2006, UP requested “that FRA temporarily suspend processing” its request for approval of the RSPP. *See* FRA-2006-24002-4. This request is the final entry in the public docket, and we presume that suspension of review continues to this day. Securing FRA approval for a RSPP and a PSP must be a condition precedent for the implementation of any processor-based signal and train control system, including UP’s proposed Remote Authority technology, if the goal of at least maintaining the present level of safety is to be attained.

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<sup>1</sup> This section sets forth dozens of specific subjects and items that must be included in the PSP.

UP's failure and refusal to submit the details of its technology to transparent review camouflages several critical safety concerns that must be satisfactorily addressed prior to authorizing a test pilot. In 2001, FRA published a report following a cognitive task analysis undertaken of train dispatchers' work.<sup>2</sup> Train "dispatchers are responsible for allocating and assigning track use, ensuring that trains are routed safely and efficiently, and ensuring the safety of personnel working on and around railroad track." Roth, Malsch, and Multer (2001) p. xi. Train dispatchers must "satisfy the multiple demands placed on track use that are introduced by unanticipated requests ... while still ensuring that scheduled trains are not delayed." Id. at p. 32.

This is accomplished by "estimat[ing] the time required by these unplanned activities and the time available before the track will be required for a scheduled train." Id. Factored into such estimates are the number of scheduled trains (and other activities) that will need to use the track, and the time at which the trains should arrive at the location in question, and includes anticipated future delays. Id. Further complicating matters is the reality "that trains are often delayed and/or tracks are taken out of service, making the preplanned routes and meets obsolete and necessitating dynamic re-computation of feasible train routes and meets." Id.

Central to making dispatching decisions "on the fly" is the role played by the use of voice radio communication — which the report likened to a "party line" telephone — among train dispatcher, train crews, and roadway workers. Although radio channels throughout the industry suffer from congestion, this communication "provides a shared frame of reference and allows

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<sup>2</sup> Roth, Malsch, and Multer, *Understanding How Train Dispatchers Manage and Control Trains: Results of a Cognitive Task Analysis*, DOT/FRA/ORD-01/02 (2001).

dispatchers and others working on the railroad to anticipate situations and act proactively.” Id. at p. xvi. The value of this information to a train dispatcher was most clearly demonstrated in the following narrative:

An experienced dispatcher will pick up key information that may signal a misunderstanding, confusion, or error. A case in point is a situation where an MOW person is working on the wrong track. It is easy for an MOW person, especially an inexperienced one, to become disoriented and work on track for which permission was not given. In one case, a dispatcher overheard a flagman talking to his crew say “OK to come out of the lot at Endels.” Endels was across the other side of live track. It was not the track the MOW flagman had requested to be blocked off and protected. The dispatcher immediately put signals to stop and called the MOW person to alert him.

Id. at p. 44.

The report noted that the “party line” provides important clues to potential delays, problems, or a need for assistance, whether the conversation is directly addressed to a particular dispatcher or not, and serves “as an indication of the kinds of information that dispatchers need to be effective.” Id. at p. xvi. This finding correlates with our experience as locomotive engineers, because we, too, rely upon the same “party line” information in operating locomotives and trains. The authors concluded that “[i]t is important that any new communication system preserve information now provided by the party line that is critical to safety or productivity.” Id.

This report served as a foundation for a pair of studies that produced additional reports in October of 2004. One examined the use of digital communications from the roadway worker perspective. Oriol, Sheridan, and Multer, *Supporting Railroad Roadway Worker Communications with a Wireless Handheld Computer: Volume 1: Usability for the Roadway Worker*, DOT/FRA/ORD 04/13.1 (2004) at p. ix. A prototype communication application was developed

to perform two types of tasks; one task involved requesting information related to operating conditions and the other involved requests for work authorizations. Id. at p. x. The authors reported that train dispatchers “liked the idea of receiving and granting data link transmitted work requests [and] envisioned a visual interface with which they could browse through a list of work requests and answer each request in the order they considered appropriate.” Id. at p. 9.

The other study involved side-by-side testing of a visual (text-based) data link interface with current voice radio communications. Malsch, Sheridan, and Multer, *Impact of Data Link Technology on Railroad Dispatching Operations*, DOT/FRA/ORD 04/11 (2004) at p. ix. Two scenarios were designed using 15 scheduled trains in each, and each scenario also included maintenance-of-way (“MOW”) activities. Id. Among the most significant findings were the following:

- Compared to voice radio, both data link systems improved safety and situation awareness.
- For productivity, no differences were observed between data link conditions and voice radio.
- With data link, dispatchers protected a greater percentage of trains and MOW crews as compared to the radio.
- By providing information in a visual format, data link eliminated read-back errors and hear-back errors associated with the auditory modality.
- The advantage of communicating information in visual form was evident in the evaluation of situation awareness, because situation awareness for data link was better than voice radio for routing, hazard awareness, and communication.

Id. at p. x.

The report concluded that “data link can improve communication efficiency without adversely affecting productivity, situation awareness, or safety.” Id. at p. 33. However, the authors included one important caveat, stating “it is unclear from our results to what extent dispatchers are affected by the loss of information they acquire over voice radio that is not specifically directed to them,” and stated that “[f]urther research will be necessary to determine the need for information now available through the party line and how that information could be provided in a data link system.” Id. at p. 36.

Taken together, these reports establish one benefit and identify one potential problem with the replacement of voice radio communication with data transmission as a means of communication for track authority. The benefit is the ability of the train dispatcher to better control the order in which authority is granted with the aid of the screen displaying the queue of requests. The potential problem is the loss of the “party line” information that may provide a warning to the dispatcher, a train crew, or a roadway worker of a condition that may impact their decision-making process.

As described, UP’s proposed “Remote Authority” would produce the worst of both worlds. Instead of assisting technology facilitating a dispatcher’s decisions as to whom and when to grant authority, “Remote Authority” entirely removes the dispatcher from the decisional process. This would completely disrupt train dispatching by autonomously granting authority according to some undisclosed logic over which the dispatcher would have no influence, much less control. Each time “Remote Authority” decides to grant an authority, the dispatcher would

be forced to begin his/her recalculations anew, to accommodate an authority that may not have been as high a priority in the dispatcher's mind.

Furthermore, "Remote Authority" would produce a loss of information even greater than that about which the aforementioned reports cautioned. The system would go further than to merely deprive the dispatcher of the "party line" information that currently provides a demonstrable extra margin of safety. Since "Remote Authority" would enable a computer to make decisions whether and when to grant some — but not all — authorities, the dispatcher is likely to be unaware of the granting of many authorities on a contemporaneous basis. Indeed, UP makes clear that the only time the system will notify the dispatcher is when a valid request is not granted. *See Petition* at p. 2. Thus, "Remote Authority" would deprive a train dispatcher of even more than the "party line" information that FRA has identified as an important and essential job aid; it would render the dispatcher ignorant of what is transpiring on his/her territory.

Given what is available in the public record, UP's "Remote Authority" is either ill-conceived or insidious. In any case, we strongly urge FRA to deny UP's petition for the reasons stated herein.



Don M. Hahs  
National President, BLET

Respectfully submitted,



F. L. McCann  
President, ATDA