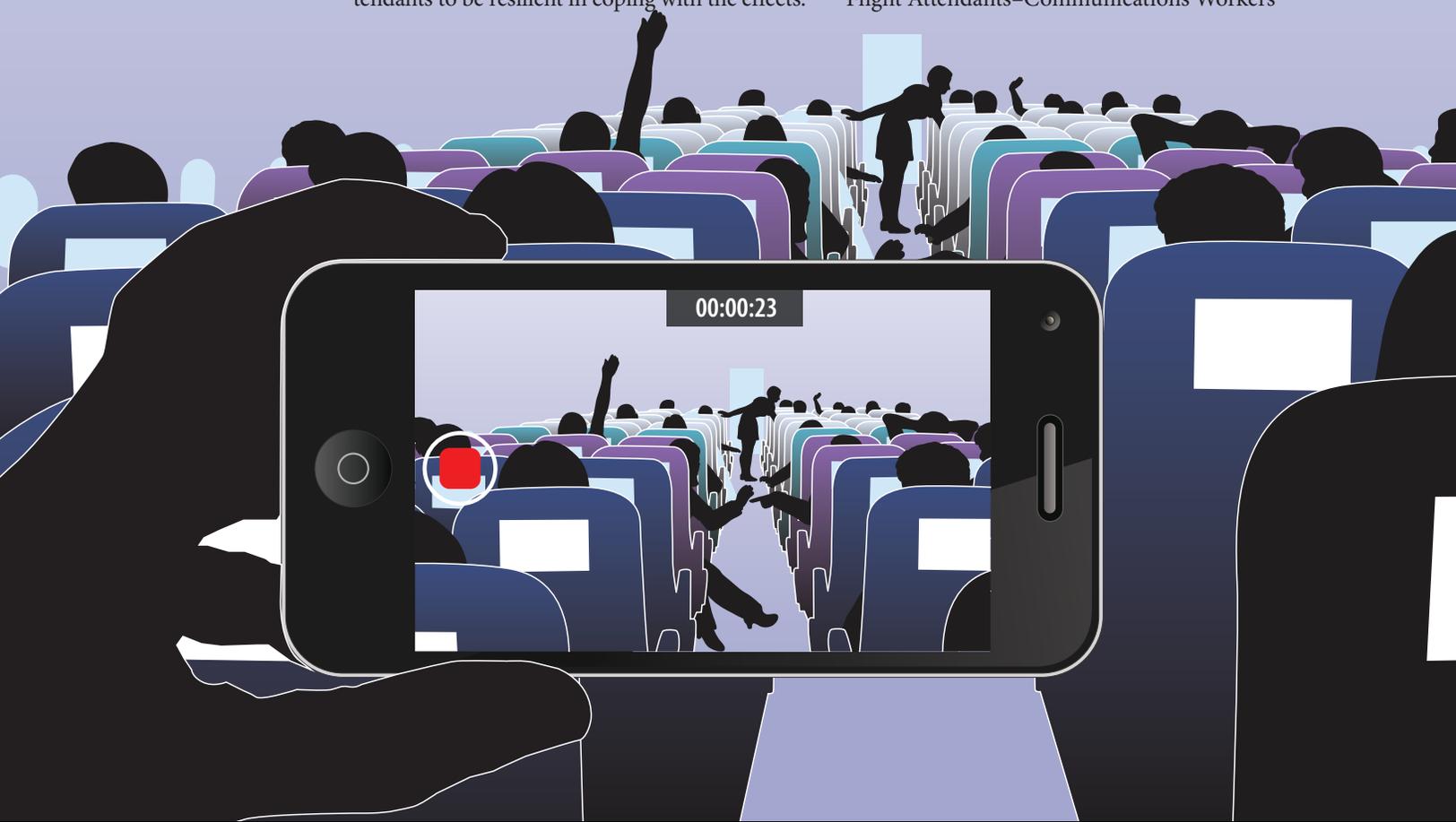


Novel risks involving airline passengers' behavior with social media and/or in-flight use of portable electronic devices (PEDs) are being validated a bit at a time, say two U.S. cabin safety specialists. Early signs lead them to expect these changes to be a lasting consequence of governmental decisions to accommodate public demand for expanded in-flight use of passenger-supplied PEDs and media they produce. So they recommend that training programs specifically prepare flight attendants to be resilient in coping with the effects.

Speaking at the World Aviation Training Conference and Tradeshow (WATS 2014) in April, Larry Parrigin, manager of curriculum development, Southwest Airlines University, focused on disruptive changes that social media have brought to the cabin environment, airline classrooms and the lives of flight attendants — especially when crewmembers' decisions and on-the-job actions “go viral” within minutes on the Internet. Candace Kolander, coordinator for air safety, health and security, Association of Flight Attendants–Communications Workers



# Brave New World

BY WAYNE ROSENKRANS

**Social media pressures and expanded use of portable electronic devices disrupt conventional cabin safety.**

of America (AFA-CWA), addressed what she described as a rushed method of enabling all-phase PED use that in October 2013 resolved concerns about electromagnetic interference risks but so far overlooks some of the human factors.

### Social Media Disruption

“Social media [use] is now the no. 1 activity on the web,” Parrigin said. “Social media are used by our employees and passengers. How do we incorporate that and deal with that in our training environments? ... It also allows our customers to air our goofs and blunders in a matter of seconds — and a lot of times before we can actually be prepared to respond. ... This is the new reality that our flight attendants are currently facing.”

Relevant training begins with education about the potentially harmful consequences that can arise from any aviation professional’s communication through social media. Typically, formal training first covers the airline’s social media policy for employees, he said.

“All of our employees have a right to free speech, but a paycheck comes with a certain level of responsibility, and I think we owe it to [flight attendants] to really educate them,” Parrigin said. “But there are very few policies in place if any of our passengers utilize social media. We don’t spend a lot of time training our folks on that ‘ever-present watchdog’ in the cabin — and I think this has taken on increased relevance, especially now that most [U.S. airlines] have gate-to-gate PED policies in place [with a] WiFi system active gate to gate. Now we say, ‘Work every flight as if someone is taking a photo or video of what you’re doing in the airplane — because they are.’”

The new normal is that, at the first sign of trouble in the cabin, passengers immediately retrieve smartphones to take photos and make video recordings, cabin crews report. Increasingly, the resulting digital media are uploaded to social media sites just as soon as these incidents occur, he said.

Among diverse subjects captured have been aircraft anomalies, crew responses to disruptive passengers and abnormal behavior of aircraft

crewmembers. Parrigin showed that an Internet search during the conference, for example, for the phrase “flight attendant meltdown” produced tens of thousands of web page hits.

The recordings made with PEDs can result in a benefit or can do harm, or both, from the standpoint of cabin safety. “The good side is that recording on the airplane ... gives us a raw, unfiltered [look] as to what is actually occurring in the cabin,” Parrigin said. “This is not a flight attendant report. This is not a customer letter. This is not a re-creation scenario. It is what is actually occurring. Now on the flip side, these photos and videos rarely show the lead-up to any particular event. All of our patient interactions with difficult customers do not warrant any kind of social media update. .... So we have a very skewed perception. We get all of the drama with none of the context. Without that context, these events are very easily misinterpreted by anyone who wants to play armchair quarterback.”

Flight attendants and other cabin safety specialists — as aviation professionals — have a responsibility not to draw conclusions about an event based on a single source. This includes caution about how any externally sourced videos and photos from the Internet are presented during flight attendant training, he said.

### New Training Resource

“If you ask, ‘Should we use social media in training?’ I think we can because there’s a ton of it [sometimes reflecting] exactly what’s happening on the airplane,” he said, acknowledging that instructors and trainees also need to apply their judgment, their “credibility filters” and “a healthy dose of skepticism” about the possibility of false information being communicated through social media. Parrigin used as an example a Southwest Airlines Boeing 737 landing accident at La Guardia Airport, which a number of passengers documented by taking photos and videos from inside and outside the airplane.

“The first images that we actually saw on the news were taken by these passengers on the airplane,” he said. “Several videos were shot in the

cabin — several videos of the landing, several videos of the evacuation.” In the edited version of the video clip shown at WATS, a flight attendant directs passengers to bring along the smaller carry-on bags and purses already in their hands as they jump onto slides. This instruction is inconsistent with training on telling passengers to leave behind all carry-on items.

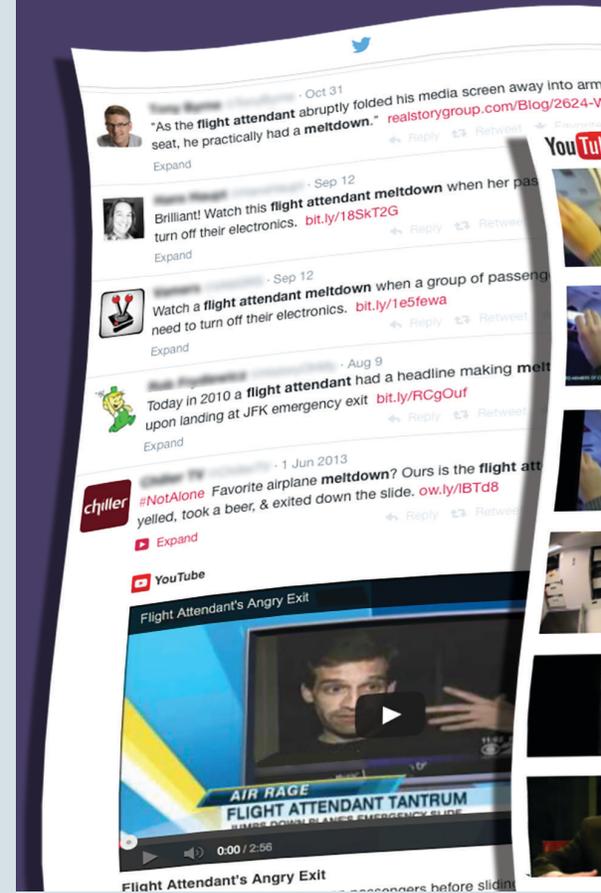
However, Parrigin said the video clip omits contextual and explanatory information. A more complete version shows that the evacuation flow already had been impeded by numerous passengers asking for exceptions to her initial “Come this way, leave everything behind!” command and that she exercised judgment per training and made a decision to override the standard command with “Just bring your small stuff — let’s go!” to successfully expedite evacuation in these specific circumstances, he said.

“The biggest issue ... was a huge shock for the crew coming down the escape slide [and] facing a line of passengers with their cell phones out who were photographing and filming the accident scene,” Parrigin said. During the airline’s debrief process, one flight attendant also recalled feeling “assaulted” by critical comments left on social media sites, especially some posted by people who identified themselves as flight attendants. “The comments questioned their actions, questioned their decisions [and] criticized the decisions without taking into account the conditions [and emotional states] that the flight attendants were actually facing, and without really knowing what was occurring on board that aircraft,” Parrigin said. Particularly trivial, he said, was criticism of the flight attendant wearing an apron while conducting the evacuation.

Flight attendants assume that part of performing safety duties on any aircraft, anytime, is psychological readiness for emergency situations. But some training professionals now are expressing concerns that in the current environment — and especially among those unprepared for today’s likely scenarios — crewmembers “may hesitate for fear of being judged wrong out there on the World Wide Web, and they could hesitate when critical thinking and quick decisions are called for,” Parrigin said. “That hesitation could cost lives.”

Assuming that passengers’ in-flight use of PEDs and social media treatment of airline crews really have become the daily reality for crewmembers, Parrigin believes that shifts within training can make a difference. “We need to establish a culture that empowers our crewmembers with critical thinking skills ... to make decisions and take actions without fear of being judged wrong,” he said. “That assertiveness and decision-making process [are] critical in any sort of safety environment. We need to have that frank discussion of the presence and possible impact of social media ... in the classroom before they encounter this on board the aircraft — especially in a critical situation.”

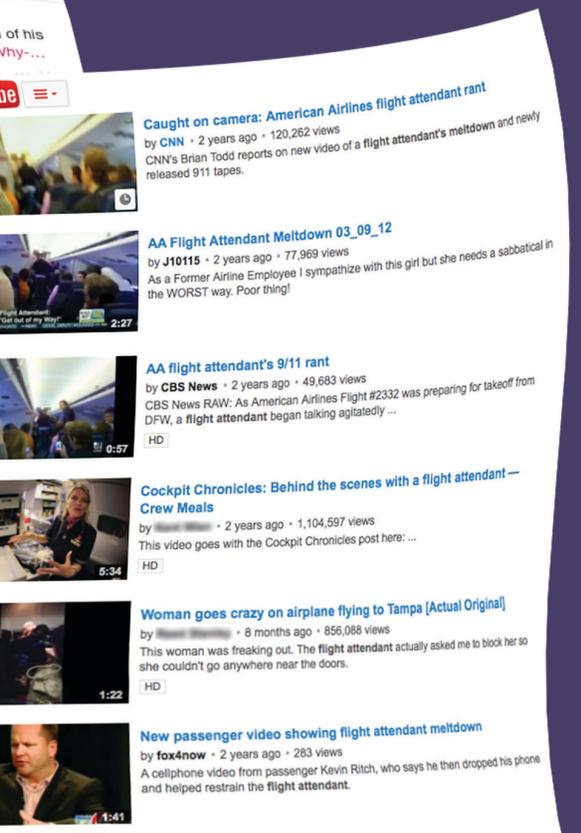
One tactic for introducing these realities during training is to incorporate PEDs into cabin event-management scenarios, especially those involving emergencies. Parrigin said that as he watched another U.S. airline’s recurrent training, he saw a person playing the role of a passenger filming the emergency situation in a manner likely to induce distraction and stress. Another way to help overcome these factors is to record scenarios with mobile phones, tablet computers and other PEDs for immediate feedback to the participants



and to strengthen their resolve to disregard the presence of such devices.

“We could use our cell phones, we could use our iPads, to actually record student performance in the cabin mockups then use those videos to debrief the flight attendants and say, ‘Hey, here’s your door drill ... right here ... you forgot to assess the conditions.’ ... That increases the flight attendant’s comfort level with facing the camera when they’re having to perform tasks.”

Finally, flight attendants should be able to cope more easily with social media fallout by knowing that their airline’s seasoned investigators and cabin safety professionals generally bring a sophisticated perspective from their long experience using scientific methods of interpreting human factors. “Our flight attendants have got to be reassured that their performance in any given situation — if it was proved to be necessary, reasonable and appropriate — is not going to be judged based solely on a single piece of evidence that’s been posted out



there on social media,” Parrigin said. A YouTube video by a passenger, for example, does need to be considered as part of the airline’s or the U.S. National Transportation Safety Board’s (NTSB’s) investigative process but will not be the sole criterion for judging a flight attendant’s decisions and actions.

In flight attendant training, Southwest Airlines nearly always uses accident-scene photos deemed to have educational value, to be reflective of a vetting process by the NTSB, and available from the NTSB’s public docket. After a discussion with company flight attendants involved in the La Guardia accident, however, a decision was made not to use in training passengers’ video recordings of flight attendants. “Once that [NTSB] process is complete, then we’ll include the training recommendations,” he said. “[We asked the accident flight attendants,] ‘How comfortable are you with us addressing that accident in training?’ They’re not there yet, and to protect their anonymity and allow them time to process and

to heal, we decided not to do that [with social media videos].”

Regarding use of social media to share cabin safety-related experiences, the company’s flight attendants are covered by a generic company policy that says, in essence, that an employee posting anything that would harm the airline or harm the airline’s reputation violates the policy, Parrigin said. “We have one [social media arena] specifically for cabin services, so there’s a lot of activity and we do encourage that sharing — as long as it is respectful and does not cause harm,” he said.

### Cautions About PEDs

AFA-CWA’s Kolander said that the labor union’s resistance to the dismantling of restrictions on U.S. airline passengers’ in-flight use of PEDs echoes the resistance expressed in documents prepared by the U.S. Federal Aviation Administration (FAA) Civil Aerospace Medical Institute (CAMI). “The new policy allows portable electronic devices to be used throughout all phases of flight,” she said. “The consequence of the relaxation of the PED policy [is fewer] passengers paying attention to what we do in the cabin — the important safety message. We’ve gone through extensive efforts trying to figure out how [to] grab the passenger’s attention. We’ve spent decades on it.”

The union’s continued issue advocacy on this subject partly stems from a trend of member flight attendants expressing frustration about setbacks in performing their safety-communication duties. “We know there are studies that say that the passengers [who listen to] exit-row briefings gain knowledge that helps them to evacuate when an aircraft is burning,” Kolander said. “And yet we’ve just shut off that [benefit] by allowing the earbuds

and the noise-canceling headsets. ... With passengers now able to use PEDs during all phases of flight, including during crewmember briefings, flight attendants are concerned that important safety information is being ignored. ... Eventually, this frustration will lead to our front line safety professionals throwing up their hands [as they] stop caring about safety because we have failed them.”

Two FAA guidance documents that accompanied the Oct. 31, 2013, policy announcement emphasized the securing vs. stowing aspects of PED safety, she said: InFO 13010, *Expanding Use of Passenger Portable Electronic Devices (PED)*, and a supplement to InFO 13010, updated June 9, 2014, *FAA Aid to Operators for the Expanded Use of Passenger PEDs*. (The links to the principal FAA PED documents for passengers and airlines are available at <[www.faa.gov/about/initiatives/ped/](http://www.faa.gov/about/initiatives/ped/)>.)

While the union expected tactical advice, for example, that would prepare flight attendants to direct all passengers to remove their sight/sound-blocking electronics at safety-critical times, the guidance (see “U.S. Flight Attendant Training on Expanded Use of PEDs,” p. 20) instead emphasizes that it is not necessary for flight attendants to check for compliance with PED-related crewmember instructions, she said.

Since the new U.S. policy took effect, member flight attendants also have raised the following issues: performing all of their duties has become harder; they consider passenger use of headphones during takeoff and landing to be hazardous; they increasingly find PEDs in seatback pockets left with the cords of earbuds/headphones draped across an aisle, especially in exit rows; and their safety duties are complicated when improperly stowed devices become lost.

The union participated in the Portable Electronic Device Aviation Rulemaking Committee (PED ARC), formed by the FAA in January 2013. Beyond ensuring adequate aircraft protection against electromagnetic

interference, the committee's key issues were impact-injury risks; size/weight limits for PED seat pocket stowage and the influence of such stowage on emergency egress; overall impact on public safety and cabin

safety; management of cabin electrical receptacles to prevent impediment of egress; and the question of whether uncased, thin PEDs placed under seats would pose evacuation risks, she said.

## U.S. Flight Attendant Training on Expanded Use of PEDs

In issuing new policy and guidance on how airlines can obtain approval to expand the use of passenger-supplied portable electronic devices (PEDs), the U.S. Federal Aviation Administration (FAA) said in October 2013 that “the FAA believes that sufficient risk mitigation can occur to allow for safe operation of PEDs during critical phases of flight. ... The administrator will evaluate the rest of the [PED Aviation Rulemaking Committee’s (ARC’s)] longer-term recommendations and respond at a later date.”

The FAA also explained to its aviation safety inspectors, “[The PED ARC] report contains recommendations that can be implemented in the very near term, as well as changes in policy and guidance that need additional time to be considered and implemented. ... Allowing expanded use of passenger PEDs into the takeoff and landing phases of flight may change the flight attendant’s (F/A) responsibilities from confronting and reporting passenger noncompliance to informing passengers of the content of PED policy. “With exceptions, flight attendants are not expected to police passenger compliance or even to know whether any passenger’s PED is on, off or in airplane mode, said the guidance to operators.

One reason passenger-compliance checks are discouraged is that the overriding safety priority is to ensure flight attendants can remain in their jump seats with their seatbelts and shoulder harnesses fastened in preparation for takeoff or landing, according to the FAA.

However, the FAA’s *PED Aid to Operators* notes that “on an extremely rare basis, the flight crew may require the flight attendants to coordinate and check for compliance to ensure that all devices are turned off (e.g., potentially harmful interference noted with flight instruments).”

Focus areas for revised flight attendant training include the individual airlines’ revisions to flight manuals, handbooks and checklists covering procedural changes in normal, abnormal and emergency operations; revised predeparture safety briefings; and airline-specific details of PED securing and stowage.

The areas require operational knowledge that large PEDs — such as full-size laptops or other PEDs that weigh more than 2 lb (0.9 kg) or that could impede egress — must be safely stowed in an approved carry-on stowage location during takeoff and landing so as not to present a hazard in the event of severe turbulence, crash forces or emergency egress. Small handheld PEDs such as tablets, e-readers and smartphones may safely remain powered on — in airplane mode only — and be connected to a WiFi network installed in the aircraft (if allowed by the airline) and to Bluetooth accessories. Passengers’ small PEDs must be secure (i.e., not loose) during surface movement, takeoff, descent, approach and landing, typically by being placed in a seat pocket or “on their person,” that is, by being hand-held (although not preferable) or placed in a belt or arm holster, or placed in a pant pocket. PED cords or accessories must not impede emergency egress.

The FAA adds that flight attendant training also must “clearly address” what PEDs are approved for use aboard the specific aircraft make and model (including medical PEDs and portable oxygen concentrators); the times when approved PEDs can and cannot be used; how and when PEDs must be secured or stowed; PED modes of operation that can and cannot be used; and how and when to inform passengers of the airline’s PED policies and procedures.

Other expected training content covers how and when to report suspected or confirmed electromagnetic interference events (including transient or intermittent problems); coordinating the aircraft crew’s management of passenger PED use; effective teaching of passengers about the new PED policy; how and when passengers will be informed about these PED procedures; responding to passengers who use PEDs in a disruptive or unsafe way; and applying procedures for nonroutine, abnormal or emergency scenarios such as suspected or confirmed interference and the detection of smoke or fire in a PED or battery.

Moreover, to support cabin crews, the FAA’s public-awareness campaign now tells all passengers: “Put down electronic devices, books and newspapers and listen to the safety briefing. In some instances of low visibility — about 1 percent of flights — some landing systems may not be proved PED-tolerant, so you may be asked to turn off your device. Always follow crew instructions and immediately turn off your device if asked. Make safety your first priority.”

— WR

The committee, including FAA aviation safety inspectors (cabin), conducted lengthy discussions on safe stowage versus securing of PEDs in the cabin, and how flight attendants would need to be trained for this change. “They were very supportive, recognizing our concerns for safety ... once we launched PEDs in the cabin. They realized our concerns when [we] dealt with evacuation,” Kolander said. “So the issues were raised. The PED ARC did have to address some of these issues very specifically in the final report.”

### Holding Small PEDs

The question of whether it is acceptable for passengers to hold small PEDs in their hands during takeoff or landing needed close examination before a change in guidance and practice. “The [PED] ARC final report ... defines a stowage location as ‘one that is approved for stowage by the operator, and placarded with a maximum weight restriction’ and refers to a secure location as a ‘place that lacks formal operator approval or a maximum weight placard, but where it is considered, in the judgment of the operator, that in a survivable incident ... the item is unlikely to threaten any occupant’s safety,’” Kolander said.

The PED ARC’s final report in September 2013 represented about three years of work by RTCA technical committees. “A lot of time [was] spent on engineering aspects. ... [The PED ARC] had 29 recommendations for the FAA ... basically [answering the question] ‘How can we launch a program dealing with expanded PED use on aircraft?’” she said, noting that the new FAA policy was announced a few weeks later. “The FAA didn’t say ‘Let’s [set] a timeline, let’s take a break, let’s say that all aircraft will be PED-tolerant in six months.’”

From AFA-CWA’s perspective, the FAA’s guidance for cabin crews has not gone far enough beyond content of a PED-related announcement to passengers prior to takeoff and landing. This announcement first seeks to gain passengers’ attention to and cooperation in minimizing PED distractions during the safety briefing itself. Especially for the predeparture safety briefing, the reason for paying attention should be stressed, it says. The announcement also should instruct passengers to secure their PEDs and other loose items, and tell them the types of devices permitted, when they are permitted, and how to prevent personal injury. As noted, it also says that “an operator’s flight attendants are not expected to conduct a compliance check to ensure PEDs are stowed or secured.”

Another factor behind the union’s concerns is flight attendant training that emphasizes that every second lost to distractions after the decision to evacuate an aircraft could mean the difference between life and death, Kolander said. The passenger-made evacuation video shown by Southwest’s Parrigin, she said, showed the extra difficulty that can occur in getting people moving.

“Everyone is trying to collect some of their personal [PEDs],” she said of the video. “Now, they want to make sure that their cameras or cell phones are available and ready to start taking videos and pictures. So that even slowed the evacuation.”

The memo from CAMI, which accompanied the PED ARC’s final report to the FAA, said in part, “CAMI cabin safety researchers recognize the attraction of ‘PED-tolerant’ airplanes, including the allure of allowing these devices to operate during all phases of flight. However, in addition to ... scientific data and analysis pertinent to maintaining a ‘clean cabin environment’

accident data show that takeoff/initial-climb and final approach/landing are critical phases of flight for accidents and fatalities. ... The research and accident statistics indicate that added distractions (e.g., usage of PEDs) during critical phases of flight would unnecessarily increase risk, discount passenger safety, and disregard the many serious efforts to rectify the shortcomings related to passenger safety awareness.

“In particular, use of PEDs should continue to respect the clean cabin environment during the pre-flight briefing and critical phases of flight, since the focused attention of passengers to PEDs creates competition for passenger mental capacity. People can selectively attend to only one thing at a time. ... It seems inexplicable to promote PED usage during the very times when passengers might need to engage that safety information the most.”

Overall, the human factors dynamics in the cabin, although covered in the PED ARC deliberations, did not get the level of attention that AFA-CWA expected. From the union’s perspective, FAA has yet to address a number of other ramifications, such as how cabin crews will get adequate time built into their airline procedures to educate passengers about PED safety.

“Flight attendants’ concerns nowadays are reflecting exactly what the [PED ARC wrote], they’re saying the exact same things,” Kolander said. “For any country, any company, that is looking at doing this on aircraft, [note how] we spent years looking at the technical issues ... and we spent no time to decide what was going to happen to us in the cabin. ... Had [the United States] done it by saying, ‘OK, we mean this as a six-month period when all airlines can get PED-tolerant, and we will launch on the same day’ — maybe that would have been a better way to do it.”