DRAFT

Challenges to IFE via Carrier-Provided Portable Electronic Devices

Background

Members of the Committee have suggested among other options a regulatory requirement that airlines that provide inflight entertainment (IFE) via inaccessible legacy seatback IFE systems might provision portable electronic devices (PEDs) to passengers as an alternative for inflight entertainment accessibility. APEX provided substantial written information to the Working Group's August 12 call on this topic that details the difficulties of a carrier-provided PED program from the perspective of its membership. This background paper provides additional details from the point of view of air carriers.

There are enormous challenges to a mandatory PED program and carriers strongly believe that no rules should mandate carrier-provided PEDs. Every carrier's technology and business model are different, however, so IFE compliance should offer various paths, potentially including PEDs as an option, without mandating carrier-provided PEDs.

There are a host of reasons not to mandate carrier-provided PEDs. These include negative cost-benefit balance relative to other options under most circumstances; the fact that other options are likely to provide a better customer and entertainment experience for users; and the reality that a mandatory PEDs program threatens to force at least some carriers or aircraft to turn off inaccessible IFES, rather than bear the anticipated exceptionally high cost and logistical challenges of such a compliance path.

APEX reports that 97 percent of passengers carry a PED already, making a carrier-provided PED itself redundant for most passengers in terms of hardware. Personally-owned PED use is only increasing, and that small three-percent gap is likely to become yet smaller over time. As discussed in the ACCESS Committee's IFE Working Group, due to obstacles that cannot be overcome, including restrictions by content providers, IFE content that might be preloaded on a carrier-provided PED will not be the same as entertainment provided by seatback IFES or overhead IFES. Moreover, the trend in IFE is toward passenger-selected (preloaded or streamed) entertainment selected from the entire universe of entertainment, not from a much smaller universe of carrier-selected movies or television programs. The inconvenience to passengers of having to collect, return and provide a deposit for the device itself also makes other options, potentially including WiFi access, more attractive to passengers.

Even if Carriers Offered a PEDs Program It Might Not Be Customer Friendly

Air carriers want to serve passengers in the most convenient way possible. The characteristics of a carrier-provided PED program alone are likely to make this option unacceptable to many customers. First, a PED program might provision the device onboard the aircraft or elsewhere, as discussed below. In a program that provided PEDs anywhere other than onboard the aircraft, carriers would not offer PEDs without a deposit presumably equal to the value of the device. This alone is a barrier for many passengers to access such a program. Second, the customer would frequently have to pay this deposit through a separate transaction since approximately one-half of passengers book through a travel agent,

and even for passengers who book directly there would need to be agreement for the deposit. The PED request might also be made at a different time than the ticket is booked, which would drive a separate credit card transaction. Third, at least one major carrier charges for entertainment in its economy cabin, and would presumably also charge for PEDs content. Finally, some reservation or pre-qualification would be needed to ensure availability of the device and to attempt to minimize fraud.

Quality of Entertainment

The amount and variety of entertainment that could be loaded on a PED would be limited by its storage capacity and by the need to keep entertainment generally acceptable and useable to different types of passengers, including children. Devices provided outside of the aircraft itself are also expected to be subject to restrictions on current movie content according to discussion in the Working Group. APEX has previously described many of the content-related problems to different varieties of a carrier-provided PED program; as IFE industry experts have brought forth in the Working Group, PEDs will not provide content that mirrors that which is provided by onboard (seatback) systems.

FAA and Consumer Electronics Onboard

Time has not allowed a full exploration of FAA requirements and timeframes that might be associated with a carrier-wide PED program. Even if there are not specific FAA rules or regulations that say a consumer electronics device an airline elects to board on its aircraft for crew or customer to use inflight must have FAA approval prior to implementation, carrier experience shows that airlines must do so anyway so per FAA interpretation of its various requirements. These approvals may require providing test data such as EMI testing that far exceeds what the consumer device requires for public use on the ground. It bears repeating that merely because an electronic device is available and in use on the ground does not mean that an airline might provide it for use onboard or, even if allowed, that the carrier may do so immediately. The September 2016 FAA recommendation that airline passengers not turn on or charge Samsung Galaxy Note 7 devices on board aircraft and should not stow them in any checked baggage is just one illustration of the special risks consumer devices might pose onboard and associated requirements. Moreover, FAA requirements are added or reinterpreted over time and additional FAA oversight in the area of consumer electronics onboard is always a possibility.

Fraud

Potential for fraud by passengers who are not qualified individuals with a disability is, regrettably, another barrier to a successful carrier-provided PED program. Air carriers have decades of experience administering a number of programs intended for qualified individuals with disabilities. All of these programs suffer from fraud. Carriers bear millions of dollars in costs informing the public about eligibility for programs to reduce fraud in order to ensure services are available to those entitled to them. However, there is no way to eliminate fraud entirely, and carriers are committed to minimizing any burden on qualified individuals.

In the case of PEDs, since any member of the public might enjoy an alternative or additional form of entertainment, at even a minimal one-percent fraud rate among the public, there would be potentially

10 million annual fraudulent users of a PEDs program, with associated costs. Carriers are also concerned that fraud would threaten to limit the number of PEDs available to their intended beneficiaries, especially for any first-come, first-served arrangement.

A Carrier-provided PED Program is Costly and Challenging

Even if customers were to accept the need to pre-certify, pay a deposit, and accept the limited entertainment offerings a carrier-provided PED loaded with entertainment might offer, and if each carrier had the FAA's agreement for each aircraft/device combination, the costs to carriers and other barriers alone argue against a carrier-provided PED program as a regulatory requirement. While certain carriers provide entertainment by PEDs, this is commonly in limited circumstances only; PEDs at carrier election on certain routes is far easier to administer than a system-wide requirement. Non-U.S. carriers and U.S.-carrier international flights would have exceptional and perhaps impossible challenges to overcome in providing and retrieving PEDs at non-U.S. locations, possibly including customs restrictions. Content restrictions may also be a problem for any international itineraries.

Onboard/Aircraft-anchored PEDs

As discussed, there are two major paths a carrier might use to offer PEDs. A program to provide PEDs onboard would need multiple PEDs, potentially for every aircraft in the fleet. Thousands of aircraft operate in the United States across hundreds of commercial airports and scores of air carriers serving over 900 million annual passengers. The logistics of ensuring a reasonable number of PEDs on aircraft across this network would be extraordinarily complicated as would ensuring they are charged. The huge cost burden to carriers in the past of administering medical oxygen programs, especially relative to more cost-efficient personally-provided oxygen, is a good analogy. Passengers now almost always bring their own portable oxygen concentrators (POCs) to address their medical needs inflight rather than relying on carrier-provided oxygen with the cost and, given the complexity of provisioning, service failures that plagued those programs.

Mobile/On-demand/Non-networked Carrier-provided PEDs

Any effort to provide passengers with carrier-owned PEDs outside of the aircraft itself might require fewer PED units than stocking PEDs at airports or on aircraft. Time has not permitted a full scoping, but numbers of devices needed would depend on yet-unknowable factors like demand; loss and breakage; time required to recharge the devices; possible shipping costs and times; and other factors. For any such program the passenger would presumably be in possession of the device for a longer period than the duration of the flight, creating the need to offer a PED for a far longer duration than the flight itself, perhaps days. Many other questions remain unanswered, such as how the device would be returned; ensuring devices are fully charged when needed; delivery problems; lost devices; and what would happen if the passenger ultimately cancels the trip and does not fly. Any such arrangement would require staffing for dispatch, distribution, maintenance, and content management. It is difficult to conceive of a program that would depend on delivering and/or returning the device in the secure airport space as many airports are very small and have no or minimal services and skeletal staffing, especially at

off hours. These, like other complexities, are exacerbated if any PED program were to include non-U.S. locations.

Commercial Options are Limited or Nonexistent

There is no reason to believe that a carrier-provided PED program could be easily outsourced to a third party. A third-party concept, whether for use by one or a group of carriers, is likely to incur prohibitive recurring/overhead cost structure, particularly on an expected per-legitimate usage basis precisely because many or most passengers likely prefer their personally-owned PEDs. At the same time, carriers very likely would retain responsibility for reviewing eligibility for the PED based in part on the aircraft expected to operate on the passenger's itinerary – which might or might not already have accessible seatback IFES. Each carrier's internal effort to review whether a customer is eligible for the service alone will easily run in the millions of dollars annually per carrier based on experience with administering far more straightforward programs.

A brief review did not turn up an existing service that rents PEDs to individuals, though some likely exist. Commercial providers of PEDs rentals are oriented to the business (versus individual user) market and appear to charge on a multi-day basis, with a three-day minimum for one larger provider of between $36 for an iPad mini and $90 for larger devices, for the device alone (no content). Another commercial provider shows insurance rates alone for iPad Rental of $9.99, with a deductible of $79.99; these rates cover only damage and replacement, but not lost or stolen devices. These figures give at least some idea of the costs in today's market for devices and insurance alone.

Businesses that existed in some airports in the past to rent devices that played movies no longer seem to exist or at least to exist widely, likely due to competition from more convenient passenger-owned PEDs.