

International Association of Transportation Regulators (IATR)



MODEL REGULATIONS

Governing Interior and Exterior Digital Advertising
for Taxicabs, Transportation Network Company
(TNC) Vehicles, and Other For-Hire Vehicles

March 2021

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BACKGROUND

The International Association of Transportation Regulators (“IATR”) developed model regulations for interior and exterior digital advertising and product approval processes and certifications. The IATR and its members oversee industries that have too often faced negative impacts from the introduction of new technologies into the market. While rooftop advertising has been a mainstay of the taxicab industry for decades, static advertisement displays have been limited in their overall economic boost to drivers and operators. Today, new technologies and the reduction in component costs have enabled the use of Light-Emitting Diodes (“LED”) displays for rooftop advertising and tablets to display interactive digital advertising content to passengers riding inside vehicles. These displays are able to generate significantly more revenue and, as a result, provide drivers and operators with more income than their static predecessors. Currently, there are no standardized guidelines that address the concerns of safety and aesthetics or address offensive or obscene language or content of advertisements. For these reasons, the IATR and its members worked to develop these model regulations to ensure that the rules governing these new technologies are uniform and address the policy interests of regulators, drivers, passengers, and the general public. The IATR’s Technology and Innovation committee, the TNC Working Group and the Canadian Regulators committee have been integral in developing these regulations.

At the IATR 2019 annual meeting in Calgary, the IATR Technology and Innovation Committee, discussed the IATR Model Regulations for Digital Advertising as well as product approval processes and certification on September 25, 2019. In November 2019, the IATR released the first draft of the model regulations to its members. In December 2019, the IATR received comments from various regulators and other stakeholders regarding the proposed draft regulations. The IATR considered those comments and made amendment to the IATR's draft model regulations before issuing the final model regulations, which were presented to the IATR Technology and Innovation Committee during the IATR’s 2020 annual conference on October 29, 2020.

STATEMENT OF BASIS AND PURPOSE OF PROMULGATED NEW RULES

The purpose of the model regulations on exterior and interior digital advertising is to set out high level principles, together with the decision making framework and criteria, governing the approval of devices and equipment that display digital advertisements on the exteriors and interiors of taxicabs and other for-hire vehicles, including ridesourcing services (also referred to as Transportation Network Companies or “TNCs”). Given the inherent differences between interior and exterior digital advertising, regulators should approach them differently.

Exterior Digital Advertising

Permits and Fees

Regulators should require all interested vehicle owners to obtain a permit before installing digital advertising displays on the exterior of any regulated taxicabs, TNCs, or other for-hire vehicles. The regulatory authority should not permit advertising unless the display model has been inspected and authorized for installation by the regulator. Permitting for digital advertising displays should follow the same structure and fees established for static advertising.

Product Approval Process & Inspection

Advertising displays should be inspected by the regulatory authority to determine the safety and aesthetics of the device prior before such device may be permitted in a regulated vehicle. Once a display and attachment mechanism have been inspected and approved, regulated vehicles should be allowed to apply for permits to install the approved device. It is not necessary for regulators to also individually inspect every display when it is installed. Instead, it is recommended that the attachment mechanism and the display be included in regular vehicle inspections. This will reduce the burden on regulator resources and on drivers from time that is lost while travelling to and from inspections.

Display Dimensions and Attachment Mechanisms

Regulations for digital rooftop advertising must set clear criteria for the display design and construction, including the size, location of allowable placement, and the method of attachment to the vehicle. Restrictions on display dimensions serve multiple purposes, such as assuring that the driver’s visibility is unaffected by the display as well as limiting the size of the advertising to prevent excessive or distracting large signs on vehicles.

Safety and Durability

The primary objective of regulations for digital advertising fixtures is to ensure that such displays are safely attached to regulated vehicles. The industry standard for ensuring that the rooftop fixtures are adequately constructed to withstand the rigors of urban transportation driving

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and environmental is the MIL STD 810g test procedure, performed by independent licensed professional engineers.

Taxi Top Light/Dome Light Flexibility

Taxi dome light uniformity is an important factor for public understanding of the taxi system in their city. However, with most cities establishing their own, unique dome light requirements and designs, it is difficult to provide universal solutions to hardware and technology system like digital rooftop advertising fixtures. We recommend that, within reason, regulations for digital rooftop advertising fixtures provide flexibility to providers to deliver built-in dome lights that clearly communicate to the public, and serve all functionalities required for stand-alone dome lights, but that are not exact to the stylistic or design criteria. The core functionalities and functional controls by the taximeter must be required. As for design, we recommend allowing for case-by-case reviews and approvals of non-conforming designs.

Lighting Restrictions and Public Safety

Digital Rooftop Advertising Fixtures must not confuse the public or diminish the effectiveness of public safety and law enforcement vehicles and emergency lights. Therefore, it is important that regulations for these displays prohibit the display of red or blue lights or any flashing lights to the front and back of the vehicle.

Default Malfunction Image

In the event of a device or software failure, the display must be programmed to detect such events and to automatically revert to a default condition rather than flashing lights or other distracting or unattractive images during failures.

Public Service Announcements (PSA) and Community Messaging

Digital advertising displays offer a unique opportunity for the private sector to assist city agencies and community organizations with public messaging and awareness campaigns. Unlike static displays that can only show one message at all times until physically changed, digital advertising displays allow for multiple messages to run on the same vehicle. This creates the opportunity for a portion of advertisements run on a vehicle's display to be provided to public service messages from city agencies, non-profit organizations, and other community-minded efforts along with the revenue generating commercial advertisements.

Brightness

Digital rooftop displays typically use LED or similar lighting technology. Setting maximum brightness levels for the displays can help ensure that rooftop advertising displays do not excessively illuminate urban environments at night or present excessive glare to other drivers on the road. However, regulators should consider the real world application of these devices

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when setting regulations on the maximum allowable brightness of the screen. Unlike static rooftop advertising signage, digital displays must be illuminated in the daytime to be seen. Conversely, a brightness level that is visible at night can be nearly unreadable during the daytime and in sunlight. According to a Preliminary Investigation by the California Department of Transportation (“Caltrans”), “Since perceived brightness can change depending on ambient light conditions, it is necessary to establish objective, measurable limits on the amount of light that such billboards actually emit, and set different upper bounds for different environmental and ambient conditions.”²

It is recommended that regulators allow for flexibility in product designs and capabilities without sacrificing the underlying policy objectives for ensuring the safety of the displays.

Interior Digital Advertising

Interior digital advertising displays, such as those on tablets mounted on headrests and seat backs or electronic systems installed in taxicabs (“taxi TVs”), do not warrant the same level of regulatory oversight as exterior advertising because they present different concerns regarding safety and city aesthetics. The common and existing practice among regulators is to not regulate interior digital advertising for TNCs and FHV. Digital advertising inside taxis is typically not regulated unless the advertising is part of a system installed in the vehicle to process electronic payments.

The IATR has found no compelling regulatory reason to ban digital advertising inside taxis, TNCs, or other for-hire vehicles entirely and instead recommends regulators address concerns about such advertising directly. The primary concerns of interior digital advertising are twofold: (1) the safe installation of the equipment that displays the advertising and (2) the potential intrusiveness of the audio and visual display inside the passenger compartment. The IATR believes these concerns can be easily and adequately addressed through a combination of basic safety requirements and technical specifications, if necessary. Given the nature of these devices, IATR believes regulators do not need to inspect or approve them prior to installation and that regulators may ensure the devices meet established standards during otherwise scheduled periodic inspections.

Safe Installation

Regulators should distinguish between removable devices that do not require electrical hardwiring, such as tablet computers that are mounted on seat-backs or headrests, and electronic

² Caltrans Division of Research and Innovation, Preliminary Investigation, “Effects of Outdoor Advertising Displays on Driver Safety,” October 11, 2012, *available at* dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/preliminary-investigations/digital-display-safety-pi-a11y.pdf.
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systems that are installed in a bulkhead and wired into the vehicle's electrical system. The removable devices are similar to products that are commercially available and marketed for parents to keep children entertained in the car.³ The primary motivations for featuring such devices to passengers in taxis and TNCs are typically entertainment and information and many digital advertising displays allow passengers to provide drivers with direct feedback about the devices. For these reasons, prior approval or inspection of removable devices is unnecessary absent a clear safety concern.

Any equipment installed in a vehicle after market could present safety concerns for passengers and drivers. To guard against injury, devices and equipment that display digital advertising inside passenger vehicles should be securely fastened to an interior component of the vehicle in a location that does not place a passenger or driver at risk of injury, including during crashes or abrupt stops. For avoidance of doubt, a device securely and snugly fastened to the headrest facing the backseat does not place passengers at undue risk, and such placement is common in similar devices that are used for payment purposes in taxicabs as well as entertainment of children in personal passenger vehicles. The device should remain firmly in place when traveling over rough terrain. To minimize risks, devices should not intrude significantly into the passenger compartment and should be molded without sharp edges to avoid possible injury.

Intrusiveness in the Passenger Compartment

To the extent that regulators wish to control the intrusiveness of the audio and visual aspects of devices, they may wish to require adherence to certain technical specifications. Interior digital advertising screens should allow uninterested riders to easily avoid them by turning the device off. There must be clear instructions to the passenger on how the display and volume (if applicable) can be turned off or returned to the default screen. Any default screen should be static and not visually intrusive. Devices must allow passengers full control of the volume and brightness, including being able to reduce both of these to their minimum states (muted volume and dark screen) or to invoke a “nap” or “sleep” state that essentially turns the device off. Drivers should also be able to control the devices safely from the driver compartment.

³ See SafeRoad.org, *Top 10 Best iPad Car Mounts 2020 – Ultimate Reviews & Buying Guide*, August 21, 2020, <https://saferoad.org/best-ipad-car-mounts-reviews/>; AutoGuide.com, *Top 10 Best iPad Holders/iPad Mounts for Cars*, <https://www.autoguide.com/top-10-best-ipad-holders-ipad-mounts-for-cars>. {11757074:8}

MODEL DIGITAL ADVERTISING REGULATIONS

Section __. Definitions.

- a. “Exterior advertising” means advertising that is attached to or appears on the exterior of a vehicle.
- b. “Exterior Advertising Provider” means a natural person, organization or entity that offers exterior advertising.
- c. “Interior digital advertising” means advertising that appears on an electronic display or screen mounted on the interior of a vehicle and is visible to passengers.
- d. “Rooftop Advertising Fixture” means an apparatus installed on the roof of a vehicle that displays static or digital advertising content.

Section __. Permit required for exterior advertising.

- a. No [regulated vehicle] may display any exterior advertising without a permit from [regulatory authority]. A permit is required for each exterior advertising display.
- b. [Regulated vehicles] may display exterior advertising only from an approved Exterior Advertising Provider that is authorized by the [regulatory authority] for use on [regulated vehicle].
- c. A [regulated vehicle] owner or approved Exterior Advertising Provider may apply for a permit to display exterior advertising.
- d. The fee for the issuance of an exterior advertising permit shall be [\$_____] for each display. Permits shall be valid for one year after the date of issuance, unless surrendered, revoked, rescinded or terminated prior to the expiration date.
 - a. Permits may not be transferred or assigned.
 - b. A vehicle owner must remove exterior advertising if [regulatory authority] terminates the Exterior Advertising Provider’s license to provide advertising.

Section __. Exterior advertising providers.

- a. No Exterior Advertising Provider may offer exterior advertising for use on [regulated vehicle] without first obtaining approval from [regulatory authority].

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- b. No Exterior Advertising Provider will be approved to display exterior advertising on [regulated vehicle] unless the advertising display meets the requirements specified in [Section __ Digital rooftop advertising; requirements for rooftop advertising fixture design] if it provides rooftop advertising.
- c. Exterior Advertising Provider shall ensure that advertisements that they display on [regulated vehicle] complies with the requirements specified in [Section __ Advertising requirements and standards].

Section __. Exterior advertising requirements and standards.

- a. The name of the Exterior Advertising Provider shall be displayed on the advertisement or the advertising display.
- b. Exterior advertisements shall not cover any portion of the license plate of the vehicle or any vehicle identifiers, signs, or markings required by law or regulation.
- c. Exterior advertisements shall not interfere with vehicle operation or any safety features of the vehicle, including lights, or present a safety hazard to passengers or motorists.
- d. Innovative approaches to advertising will be permitted. Consideration will be given to safety, intrusiveness and benefits to drivers, vehicle owners and passengers.
- e. An advertising campaign may include exterior advertising as part of a coordinated scheme. A separate permit is required for every exterior advertising display regardless of whether the advertising is as part of a coordinated campaign or separate campaigns.
- f. Prohibited Advertisements. (Optional)
 - 1. The following advertisements are prohibited from being displayed on the exterior of any [regulated vehicle]: advertising that is unlawful, illegal, [*obscene, otherwise offensive to public morals, etc.*]
 - 2. The Exterior Advertising Provider must remove any such advertising from public display within [__ days] after [regulatory authority] requests it do so.

Section __. Digital rooftop advertising; requirements for rooftop advertising fixture design.

- a. No Rooftop Advertisement Fixture will be approved for use on any [regulated vehicle] unless its design meets the requirements specified in [paragraph c of this section] and it has passed a physical inspection by [regulatory authority].

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b. [Regulatory authority] shall inform the Exterior Advertising Provider whether the Rooftop Advertising Fixture design is approved or disapproved for use on [regulated vehicle] within [__] business days after [____], unless it gives the Exterior Advertising Provider written notice of the need for an additional review period and the reasons therefor. If the [regulatory authority] disapproves the design, then it shall give the applicant written notice of its decision stating the specific reasons and rules or regulations that form the basis for the denial. Approval of a Rooftop Advertising Fixture design will continue without expiration provided that there are no modifications to the original approved design and unless revoked, rescinded or terminated by [regulatory authority].

c. Modifications to Approved Design.

1. Any deviation from an approved design must be reviewed and approved by [regulatory authority] before the modified Rooftop Advertising Fixture may be installed on any [regulated vehicle].
2. The Exterior Advertising Provider must inform [regulatory authority] of any deviation or material variation in the original, approved design before installing a modified fixture on [regulated vehicle].
3. [Regulatory authority] shall, within [__ business days], inform the Exterior Advertising Provider whether the modified design requires a new approval.

b. Technical Specifications and Design Requirements

1. The Rooftop Advertising Fixture shall be independently tested and certified in accordance with the Department of Defense Test Standard MIL-STD 810g by a licensed Professional Engineer and documentation of testing and certification must be submitted to [regulatory authority].
2. Each Rooftop Advertising Fixture must be securely mounted on the vehicle. The Exterior Advertising Provider must demonstrate that mountings have been safety-tested to ensure the sign will remain secured on the vehicle during abrupt stops and hard impacts and maneuvers.
3. The Rooftop Advertising Fixture must have low profile mounting to the vehicle rooftop that does not damage the vehicle.

4. The display shall measure no more than [__ inches/centimeters] high, [__inches/centimeters] long, and [__inches/centimeters] wide, not including the attachment mechanism.
 5. Advertising shall only be displayed on the sides of the device and not to the front or rear of the vehicle.
 6. No portion of the Rooftop Advertising Fixture shall extend beyond the front or rear windshield of the vehicle nor shall it impair the driver's vision.
 7. No Rooftop Advertising Fixture shall show or display a red or blue light or any flashing light visible from directly in front of or behind the vehicle.
 8. Brightness. Light emitted from a Rooftop Advertising Fixture must not interfere with, obstruct or otherwise distract from any traffic sign, signal or device, or otherwise operate to cause an unsafe condition, taking into account ambient light conditions.
 9. In the event of any hardware or software failure or combination, the Rooftop Advertising Fixture must be programmed to display a static image or solid, non-white color.
 10. Rooftop Advertising Fixtures must have remote monitoring and self-assessment capabilities.
 11. Rooftop Advertising Fixtures on Taxicabs (Optional)
 - i. Rooftop Advertising Fixtures must either incorporate the function of the [dome light/top light] into the design or be designed to ensure unobstructed visibility and functionality of the [dome light/cruising light], including the [medallion/license number].
 - ii. Innovative approaches to incorporating the functionality of the [dome light/top light] will be considered. Consideration will be given to safety, intrusiveness and benefits to drivers, vehicle owners and passengers.
- c. Public Service Announcements (PSA) and Community Messaging.
1. Exterior Advertising Providers shall make available 10 percent of their total advertising inventory for use by state and local agencies, not-for-profit

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organizations, the arts, community initiatives, and other messages that benefit the public good at no cost.

2. [Reserved for rules about provider discretion to determine advertising to display.]
- d. Maintenance of Rooftop Advertising Fixture. The Exterior Advertising Providers is responsible for regularly inspecting each installed Rooftop Advertising Fixture to ensure ongoing safe attachment to the vehicle.
- e. Termination of Authorization of Rooftop Advertising Fixture. [TBD]

Section __. Interior digital advertising.

- a. For the purposes of this section, the term “digital advertising display” means the electronic system, electronic display, tablet computer, screen, or other equipment, including its component parts, that displays digital advertising to passengers in the backseat of a vehicle.
- b. [Regulated vehicles] may display interior digital advertising that complies with the requirements of this section.
- c. All digital advertising displays in [regulated vehicle] must comply with the requirements of this section regarding safety, technical specifications and design requirements. Any display that does not comply with this section is prohibited in [regulated vehicle] and must be removed from the vehicle.
- d. Safety, Technical Specifications and Design Requirements
 1. Any digital advertising display that produces sound must have a maximum volume of [100 decibels] and must be mutable. Passengers and the driver must be able to control the volume of the digital advertising display and be able to turn off the volume.
 2. Passengers must be able to set the brightness/luminance of the digital advertising display to a minimum level no greater than [2 lumens].
 3. The digital advertising display must be designed, constructed and installed in such a way that it does not present a danger to passengers or the driver, including from impact with the display in the event of a crash, abrupt stop, or other maneuver.

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- e. Interior digital advertising may not contain content that is unlawful, illegal, [obscene, or otherwise offensive to public morals]. (Optional.)

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