

# Regulating Signs in the Digital Age

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## Agenda

- Legal Authority to Regulate
- Digital Billboards
- Other Digital Signs
- Regulatory Language
- Resources

## Legal Authority to Regulate

- Sign regulations come under the Police Power, which...
- Allows restrictions on freedoms that are in the public's interest, by...
- Regulating the time, place or manner of the exercise of that freedom...
- For a substantial governmental interest (for signs: aesthetics or traffic safety).

## Legal Authority to Regulate

### Substantial Governmental Interest

"No empirical studies are necessary for reasonable people to conclude that billboards pose a traffic hazard, since by their very nature they are designed to distract drivers and their passengers from maintaining their view of the road."

—Major Media of the Southeast v. City of Raleigh, 621 F.Supp. 1446, 1450 (E.D.N.C. 1985), aff'd, 792 F.2d 1269 (4th Cir. 1986), cert denied, 479 U.S. 1102 (1987).

## Legal Authority to Regulate

### Legal 101 Sign cases:

- Union City Bd. of Zoning Appeals v. Justice Outdoor Displays, 266 Ga. 393 (467 SE2d 875) (1996).
- Metromedia v. City of San Diego, 453 U. S. 490 (101 SC 2882, 69 LE2d 800) (1981).
- Central Hudson Gas & Elec. Corp. v. Public Service Comm. of New York, 447 U.S. 577 (100 SC 2343, 65 LE2d 341) (1980).
- The "Four-Part Test."

## Legal Authority to Regulate

For a sign regulation regarding commercial speech to be constitutional:

- Does the commercial speech NOT concern unlawful activity or is NOT misleading?
- Does the regulation serve a substantial governmental interest?
- Does the regulation directly advance that governmental interest?
- Is the regulation NOT more extensive than is necessary to serve that interest?

## Digital Billboards

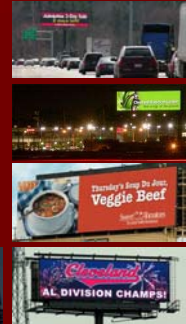
### The Battle Rages ...

- Outdoor Advertising Association of America  
[www.oaaa.org](http://www.oaaa.org)
- Scenic America  
[www.scenic.org](http://www.scenic.org)
- Lamar Advertising  
[www.lamar.com](http://www.lamar.com)
- Clear Channel Outdoor  
[www.clearchanneloutdoor.com](http://www.clearchanneloutdoor.com)

## Digital Billboards

### What are they?

- LED displays
- Remotely programmable
- Multiple messages
- Change periodically
- Time sensitive



Outdoor Advertising Association of America



## Digital Billboards

Unsafe and Unsightly at Any Speed

## What's wrong with digital signs?

- Aesthetic Concerns
- Highway Safety Implications
- Environmental Consequences



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## Aesthetics

- Brightest objects in the landscape
- Become dominant visual element and overwhelm the fundamental character of the place
- On-premise digital displays with motion can be particularly garish
- Distraction from other visual/scenic qualities
- Clash with historic or established architectural elements, even at great distances

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## Other Considerations

- Effects on property values
- Light and noise effects on nearby households and businesses
- Enormous compensation costs if signs are altered, moved, or removed



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## Highway Safety

- Brightest object in the driver's field of vision, especially at night
- Cause inadvertent and instinctual glances
- Images rotate every 4, 6, or 8 seconds causing lingering looks to see what's next
- Complex messages often take 5 seconds to comprehend



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## How bright is a digital billboard?

- The sun is measured at 6,500 nits
- During the daytime, a digital sign can be set at over 10,000 nits
- The Virginia Tech Transportation Institute found digital billboards to be 10X brighter than the surrounding area, and 3X brighter than a traditional billboard



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## What do we know?

(Source: 100-Car Naturalistic Driving Study, USDOT National Highway Traffic Safety Administration)

- Anything that distracts the driver from the forward roadway for more than **two seconds** significantly increases the chances of crashes and near crashes.
- 23% of crashes and near-crashes that occur in metropolitan environments are attributable to eyes off the forward roadway greater than **two seconds**.
- Nearly 80% of the crashes and 65% of near crashes were caused by distractions that made the driver look away for **up to three seconds**.

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## Some common-sense math: add it up

Brightest object in driver's field of vision that attracts inadvertent and unwilling glances  
+  
Frequently changing intermittent messages cause glances to linger to see what's next in the show  
+  
Complex advertising messages that take five seconds to comprehend  
=  
**More than two seconds**

*The scientifically established driver distraction threshold is shattered by digital signs.*

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## Can a digital sign simultaneously be safe for motorists and effective as an advertising medium?

- If the motorist spends enough time to read and comprehend the sign, by definition they have taken their eyes away from the driving task too long
- Digital signs are *designed* to pull drivers' attention from the roadway, otherwise they are useless as advertising
- Drivers already have too much distraction inside and outside the car
- Digital signs, because they are especially distracting due to bright light, vibrant color, and image changes or motion, divert attention from official signs that are necessary for the safe operation of the car

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## What research is coming?

- Federal Highway Administration is planning research (completion 2009)
- The American Association of State Highway and Transportation Officials (AASHTO) is sponsoring preliminary research leading to future investigations
- The Transportation Research Board of the National Academy of Sciences is conducting a human-factors workshop and will manage AASHTO research

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## What Should State and Local Governments Do?

The only responsible action is a **moratorium** on electronic billboard permits until all the data is in and public safety can be assured,

because ...

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## Communities may expose themselves to enormous liabilities

- The Highway Beautification Act requires cash compensation to sign owners of billboards on Interstate and federal-aid highways
- Compensation is usually defined as the value of the structure, plus lost revenue, making each digital sign worth millions of dollars
- The costs of compensating billboard owners will be enormous even in the course of normal highway widenings and improvements if the signs need to be moved or taken down
- Once studies are completed, and if the signs are found to be unsafe in their current configurations, any required changes to sign operations may cost governments millions in compensation payments
- Who will be held liable if accidents are influenced by the signs if it is shown that governments knowingly permitted their construction even in the face of pending research or critical safety studies?

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But isn't there research that says these signs are safe?

The billboard industry sponsored two studies of digital signs in Cleveland conducted by Suzanne E. Lee and Tantara Associates, purporting to show they are safe.

According to the Philadelphia Inquirer (8/21/07), Clear Channel claims they paid for the research, although the reports say the Foundation for Outdoor Advertising Research and Education, an arm of the Outdoor Advertising Association of America.

The Maryland State Highway Administration commissioned human-factors expert Jerry Wachtel to assess the validity of the studies and prepare a peer-review report.

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## The Wachtel Report

Found serious deficiencies in both reports in terms of:

- Decisions and assumptions made in support of the research
- Methodology
- Review and application of cited literature
- Statistical methods, controls, and analyses
- Misleading and inconsistent reporting, and evidence of bias

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"Having completed this peer review, it is our opinion that acceptance of these reports as valid is inappropriate and unsupported by scientific data, and that ordinance or code changes based on their findings is ill advised."

Jerry Wachtel, CPE  
The Veridian Group, Inc,  
Berkeley, California

*A Critical, Comprehensive Review of Two Studies Recently Released by the Outdoor Advertising Association of America*

Prepared for  
Maryland State Highway Administration  
October 18, 2007

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## Digital Signs and the Highway Beautification Act

- Violate the Highway Beautification Act itself
- Violate HBA regulations which prohibit "intermittent" lights
- Catastrophic Federal Highway Administration memorandum of September 25 ignores law, regulations, existing research, future research, potential financial liabilities, and common sense

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## FHWA memorandum

- Violates HBA provisions on off-premise signs
- Violates regulatory prohibition on signs with "intermittent" lights
- Permits signs before FHWA research completed
- Ignores NHTSA findings on two-second distraction threshold
- Ignores later costs if signs must be altered or removed
- Subverts federal rule-making requirements

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## Environmental Considerations

- One digital billboard consumes 397,486 kWh/year\*
- The carbon footprint of one digital billboard = 49 traditional billboards or 13.39 homes
- One digital billboard = 108.41 tons/year of carbon dioxide
- Standard size digital billboard contains 449,280 light-emitting diodes



\* Source: U.S. Green Buildings Council Central Balcones Chapter (Texas)

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For More Information

[www.scenic.org](http://www.scenic.org)

## Georgia Law

- Outdoor Advertising Law, § 32-6-75(c)(1)
  - Static for at least 10 seconds
  - Changes: min 3 sec (2 sec for electronic)
  - Minimum spacing – 5,000 feet
- § 32-6-97. Construction of part  
Nothing in this part shall be construed to abrogate or affect any lawful ordinance, regulation, or resolution which is more restrictive than this part.

## Glance Time

Look  
at  
this!



## Duration

Ten seconds



## Brightness



## Brightness



## Brightness



## Brightness

- A consultant report for the City of Minnetonka MN in 2007 found that:

There is no objective definition of excessive brightness because the appropriate level of brightness depends on the environment within which the sign operates.

- Minnetonka Staff noted:

[T]here is currently no good way to measure the brightness of signs in the field. Sign manufacturers can measure the light emitted by LED signs in a controlled factory setting by measuring the "nit" level, but those conditions cannot be re-created in actual field conditions. Additionally, the instruments used to measure brightness are currently very expensive.

– "DYNAMIC" SIGNAGE: RESEARCH RELATED TO DRIVER DISTRACTION AND ORDINANCE RECOMMENDATIONS; SRF Consulting Group, Inc.; June 7, 2007

## Brightness

GA Outdoor Advertising Law reads –

§ 32-6-75(a) No sign ... shall be erected or maintained which:

(9) If illuminated, is not effectively shielded so as to prevent beams or rays of light from being directed at any portion of the traveled way, which beams or rays are of such intensity or brilliance as to cause glare or to impair the vision of the driver of any motor vehicle or which otherwise interfere with the operation of a motor vehicle;

(10) If illuminated, is illuminated so that it obscures or interferes with the effectiveness of an official traffic sign, device, or signal;

§ 32-6-75(c)(1)(F)(ii) If the department finds an electronic sign or any display or effect thereon to cause glare or to impair the vision of the driver of any motor vehicle or to otherwise interfere with the safe operation of a motor vehicle, then, upon the department's request, the owner of the sign shall promptly and within not more than 48 hours reduce the intensity of the sign to a level acceptable to the department

## Other Digital Signs



## Other Digital Signs

<http://www.youtube.com/watch?v=Dpms0M35Rpc>

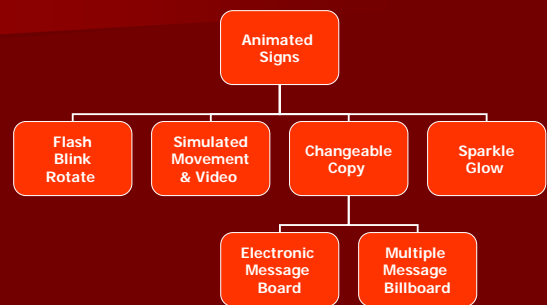
<http://www.youtube.com/watch?v=5I95QIk3wkl>

<http://www.youtube.com/watch?v=Mof8Kv85oy0>

## Some Definitions

- Animated Sign
- Automatic Changeable Copy Sign
- Billboard
- Electronic Message Board
- Illuminated Signs
- Multiple Message Billboard
- Portable Signs
- Vehicle Signs

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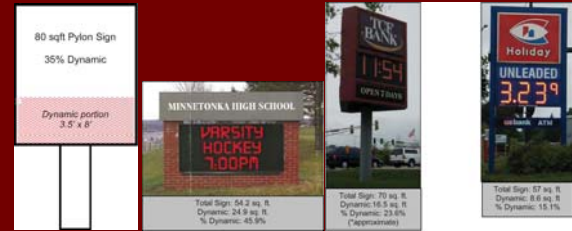


## Some Illustrative Regulations

- Animated Signs
- Changeable Copy Signs
- Location
- Spacing
- Sign display activation
- Illumination
- Orientation
- Maximum size
- Replacement
- Street blimps
- Interactive messages
- Permit renewal
- Hackers

## Some Illustrative Regulations

- Size of Dynamic Portion



## Resources

- Legal Cases
- Studies and reports
- Web Sites

[www.bill@planross.com](mailto:www.bill@planross.com)