Finding Common Ground When Regulating Electronic Message Centers

Planning Webcast Series

VITAL SIGNS, VIBRANT COMMUNITIES.

Mike Freeborg – Clarity Forge Consulting, LLC

James Carpentier AICP – International Sign Association

August 25, 2017

APA American Planning Association **County Planning Division**

Making Great Communities Happen

SIGN RESEARCH FOUNDATION™

ISA® INTERNATIONAL SIGN ASSOCIATION

Common Questions

- What are electronics signs?
- How do we strike a balance between their use and community aesthetics?
- How do we allow them without:
  - Looking like Las Vegas?
  - Negatively impacting community safety?
- How do we regulate them in ways that are understandable and enforceable?
- Impact of EMCs and regulation on users?

Key things to know:

- They can operate in a broad range of capabilities
- The software that controls the displays allows the end user to follow local sign codes easily…

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- The software that controls the displays allows the end user to follow local sign codes easily…

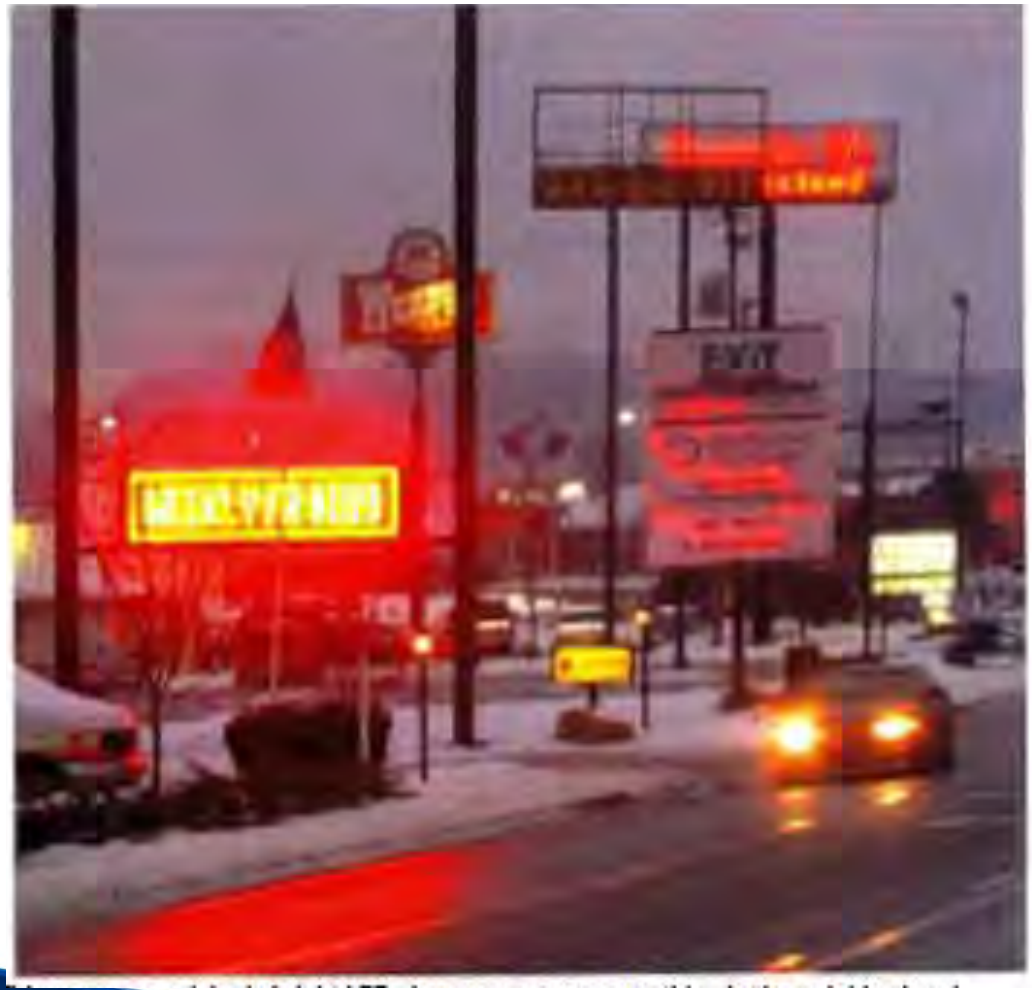
IF

the sign codes are easy to understand

The "THAT ONE SIGN" Problem

"THAT ONE SIGN"…..

- is too bright
- is too animated
- is too _____.



Resolving The "THAT ONE SIGN" Problem

A. Dispel the biggest myths and concerns that drive regulatory decisions around these signs

B. Understand and Address the Six Key Regulatory Distinctions:

1. **Brightness**
2. Message hold times
3. Transition method
4. Transition duration
5. Area / Square Footage
6. Regulating EMCs post Reed vs Town of Gilbert

Common Concern #1

"These signs will make our community look like Las Vegas."

There's no comparison.

Let's take a closer look.

Trust Us:
Your Community Will NEVER Be Confused with Las Vegas

222’ High

7,000 sq. ft. of sign area

New York, New York Pylon
Las Vegas Strip

Trust Us:
Your Community Will NEVER Be Confused with Las Vegas

222’ High

7,000 sq. ft. of sign area

New York, New York Pylon
Las Vegas Strip

Harmon: 18,300 sq ft

Trust Us:
Your Community Will NEVER Be Confused with Las Vegas

New York, New York Pylon
Las Vegas Strip

What’s allowed in your community?

Common Concern #2

"The mere presence of these signs will distract drivers, and cause more accidents."

The Truth:

Studies show there is NO causal relationship between these signs and accident rates.

Distraction vs. Danger

Statistical Analysis of the Relationship Between On-Premise Digital Signage and Traffic Safety

H. Gene Hawkins, Jr., Ph.D., P.E.

- Associate Professor and Research Engineer, Zachry Department of Civil Engineering, Texas A&M University

Statistical Analysis of the Relationship Between On-Premise Digital Signage and Traffic Safety

Background:

- Study examined data over a four-year period at 130 locations in four states.

Key Finding:

- “We did not find a statistically significant impact.”

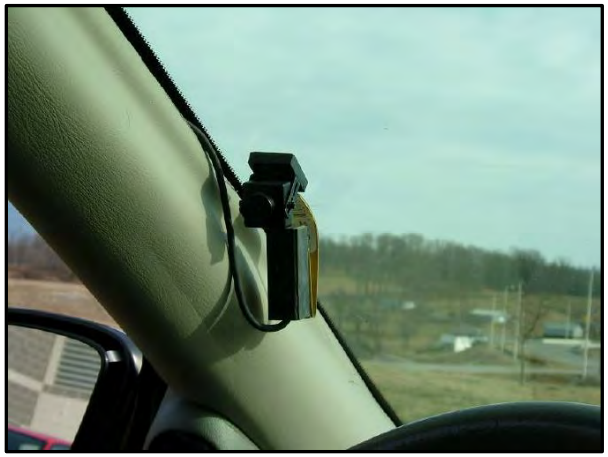
Study Weblink:

- http://www.signs.org/GovernmentRelations/ResourcesforLocalOfficials.aspx

VTTI Study: "Driving Performance and Digital Billboards" - 2007

Key Facts:

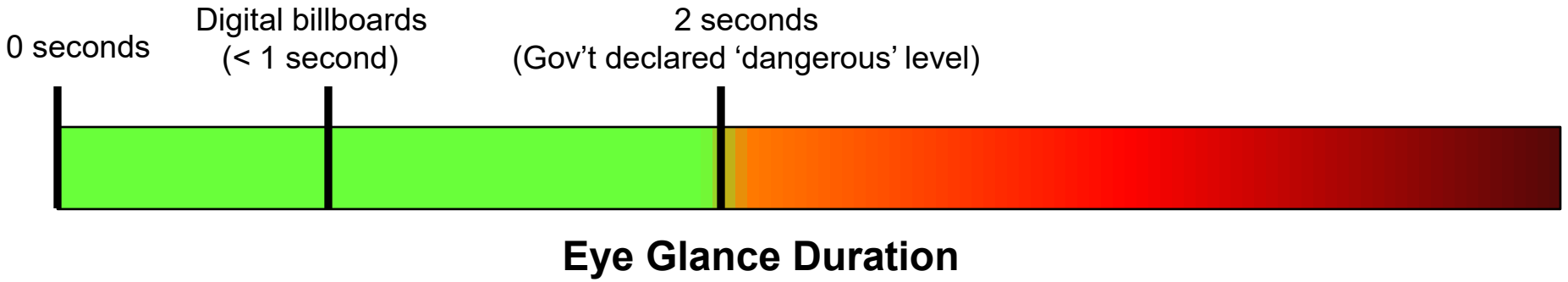
- Participants drove in instrumented vehicle on a 50 mile loop in Cleveland
- Participants were not informed about true purpose of test
- Special equipment measured eye glances toward digital billboards and other comparison targets
- Goal: Measure duration of eye glances



VTTI Study: "Driving Performance and Digital Billboards" - 2007

Key Findings:

- The mean glance duration towards digital billboards was less than one second, both day and night



Eye Glance Duration

VTTI Study: "Driving Performance and Digital Billboards" - 2007

Key Findings:

- The mean glance duration towards digital billboards was less than one second, both day and night
- In comparison: Texting = mean glance duration of 4.6 seconds during 6 second period.

FHWA Study

- Intent:
  - Measure possible affects of digital billboards on driver attention, distraction and safety
- Approach:
  - Approached research from a human factors perspective, much like Virginia Tech study
- Release Date:
  - December 27, 2013

FHWA Study

- Key Findings
  - Mean eye glance far less than 1 second
  - “The presence of CEVMS did not appear to be related to a decrease in looking toward the road ahead.”
  - “The results did not provide evidence indicating that CEVMS, as deployed and tested in the two selected cities, were associated with unacceptably long glances away from the road.”

Common Concern #3

"If we DO allow these signs, we should require long message hold times (> 1 min), because that is the only way our community will tolerate these signs"

The Truth:

A community's negative emotional reaction is *almost always* more associated with improperly regulated ***brightness.***

Effectiveness of Using Hold Time Examples

- Message hold times are one of the most difficult regulatory distinctions to discuss.
- Recommendation: Use visual examples like the following to demonstrate hold times


Hometown Grocery
Large Avacados
5 FOR $5
SIMULATION OF 30 SECOND
HOLD TIME WITH A
'DISSOLVE' TRANSITION


Hometown Grocery
FLU SHOTS
H1N1 shots now available
$15
SIMULATION OF 10 SECOND
HOLD TIME WITH A
'DISSOLVE' TRANSITION

Examples of Different Hold Times

Please visit: www.signs.org/planners, then click on the link for 'Free Resources', for examples of 30, 10, 5 and 3 second hold times.

Use them for:

- Internal staff discussion
- Planning commission
- Council meetings
- They save time and agony when discussing this topic

Consider other factors like allowable sign size, setbacks, etc when discussing hold times.

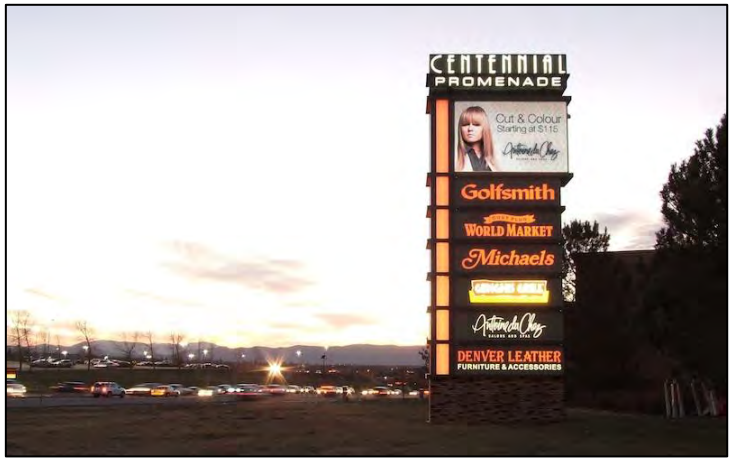
Common Concern #4

"EMCs are *way* too bright. They will shine in people's living rooms, cause accidents, etc."

The Truth:

Only *improperly regulated or unregulated* EMCs are way too bright.

There are now well established brightness guidelines that address this issue. Adopt these guidelines and you will NOT have dancing lights in living rooms.



Finding Common Ground

- On EMC and Digital Sign Issues

- ***Planning and Zoning Considerations***

The Six Key Regulatory Issues

- Brightness
- Message Hold Time
  - How long a single message is visible
- Transition Method (a.k.a. the “Frame Effect”)
  - How the message changes to the next
- Transition Duration
  - How long that change takes
- Area or Square Footage of EMC
  - % of allowable sq. ft.
- Regulating EMC’s Post Reed vs. Town of Gilbert
  - Content neutrality

Regulatory Issue #1 – Brightness

- Brightness
  - How bright the sign is
- Regulatory Considerations
  - It is all relative….

Brightness

Illuminance

– Measured in **footcandles**; meters are inexpensive (<$100); easier to check and enforce

Luminance

– Measured in **nits** or candelas per square meter, meters are very expensive (approx $3,000); difficult to enforce.

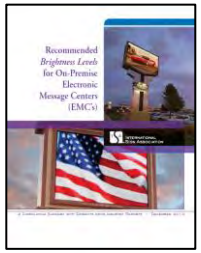
ISA's Recommended Brightness Guidelines

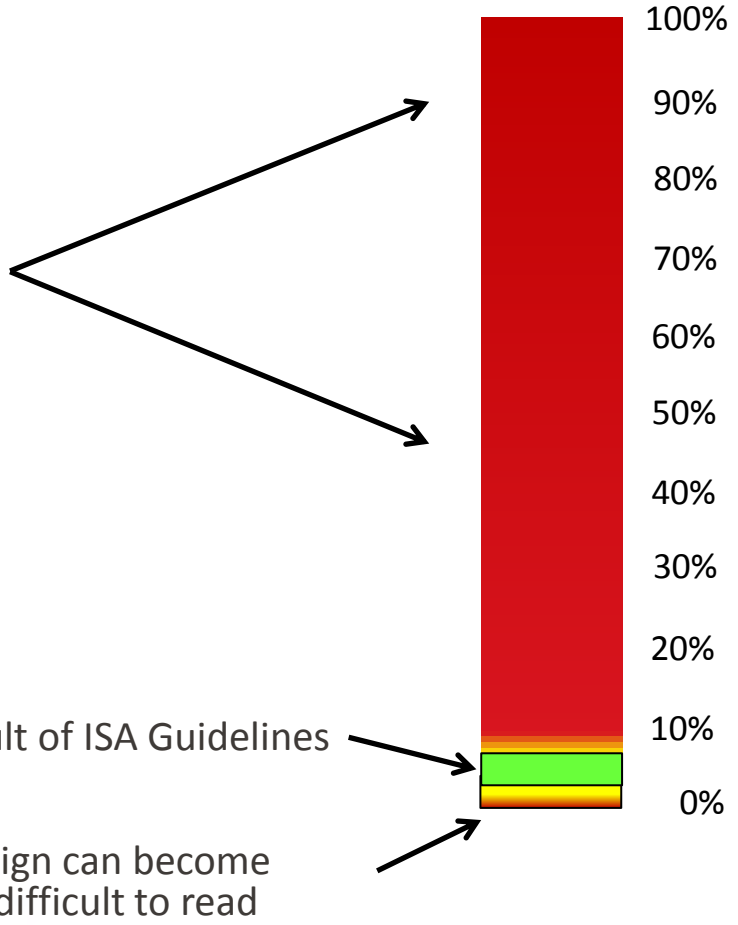
- Peer-reviewed research Developed by Dr. Ian Lewin, a renowned lighting expert with over 30 years experience in lighting science.
- Developed solely for EMCs and are not applicable for traditional signs
- Over 240 jurisdictions (8 state DOT's) have adopted

Brightness

- ***Regulatory Considerations***
  - Auto-dimming is a must:
    - "All EMCs shall be equipped with technology that automatically dims the electronic message center according to ambient light conditions."
  - Primary Brightness Guideline:
    - "The difference between the off and solid-message measurements using the EMC Measurement Criteria shall not exceed 0.3 footcandles at night. **The EMC must be measured at the recommended distance, based on the EMC size**."

Nighttime Brightness





Daytime Brightness

- Some jurisdictions have adopted daytime brightness limitations that are not effective

Field testing in Pittsburgh EMC is set at 2500 nits

We do not recommend daytime brightness controls

Regulatory Issue #2 – Message Hold Time

- Message Hold Time
  - How long a message must remain fixed in place before it can transition to another message
- Business Impact:
  - The shorter the hold time, the more beneficial for the user/business
    - Allow businesses to 'cast a wider net'
    - Provide the ability to communicate sequential messages (directions, event times, etc.)

Regulatory Issue #2 – Message Hold Time

Sequential Messages and Hold Times:

Regulatory Issue #2 – Message Hold Time

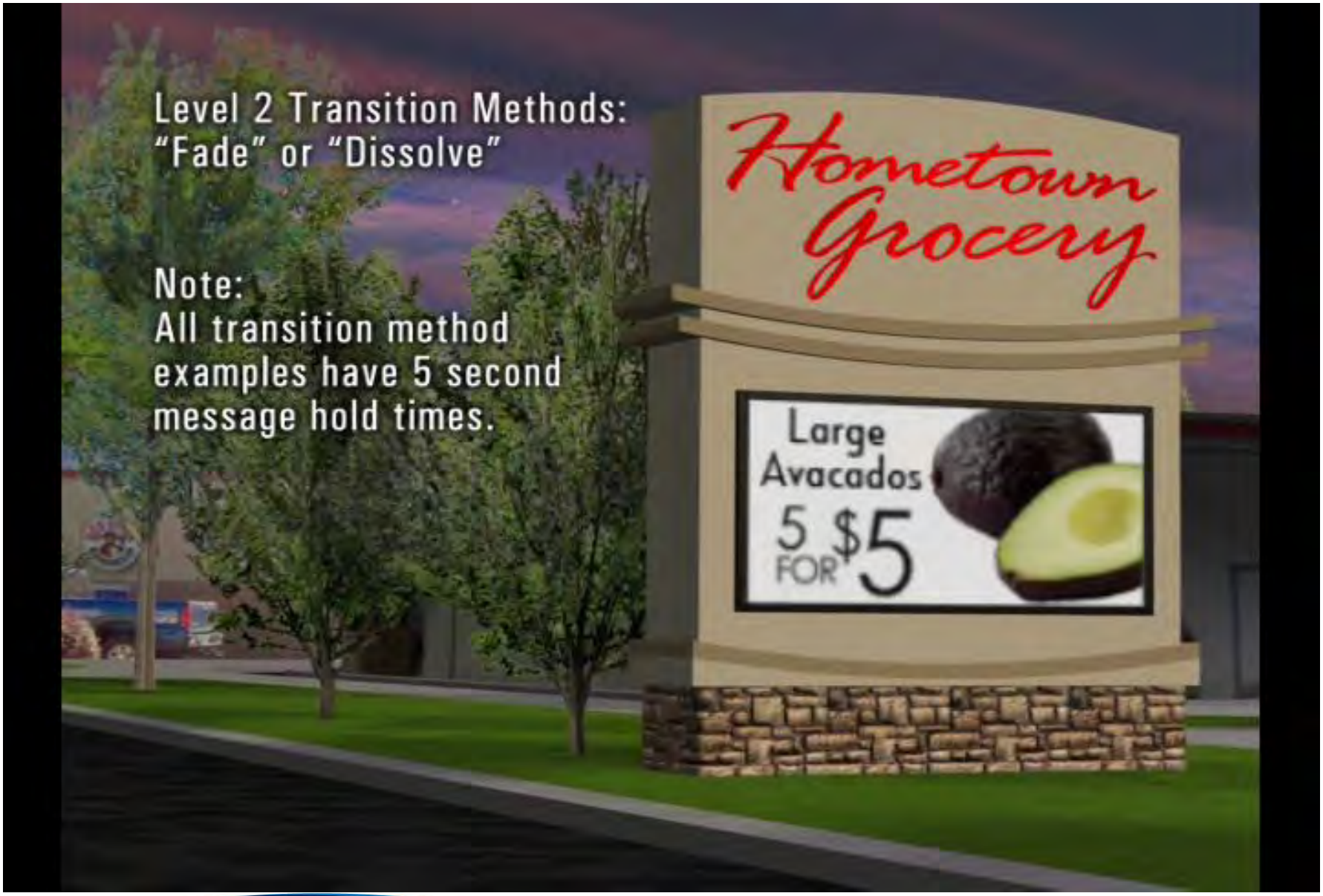
- **Business Impact:**
  - Consider what problem you are trying to solve before regulating hold times
  - Retroactively regulating this area may create legal issues
- **Safety Concerns?**
  - Safety studies demonstrate EMC's do not create a safety problem
- **Provide examples…**

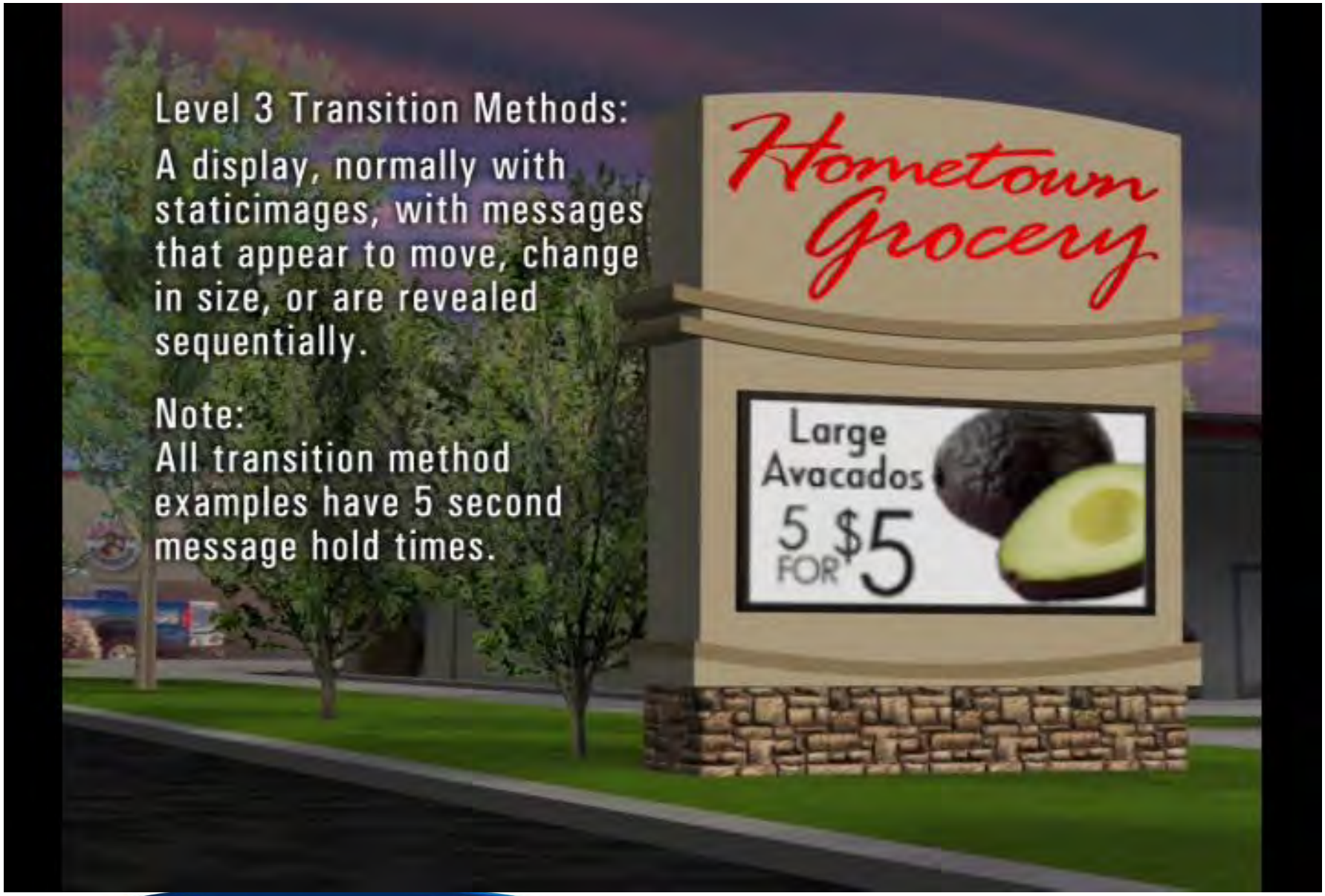
Regulatory Issue #3 – Transition Method

- **Transition *Method***
  - **How** one message transitions to the next message (not a timing issue)

Static/instant transition:


Level 1 Transition Method:
Static messages with instantaneous change (a.k.a Slideshow).
Note:
All transition method examples have 5 second message hold times.
Hometown Grocery
Large Avacados
5 FOR $5


Level 2 Transition Methods:
"Fade" or "Dissolve"
Note:
All transition method examples have 5 second message hold times.
Hometown Grocery
Large Avacados
5 FOR $5


Level 3 Transition Methods:
A display, normally with staticimages, with messages that appear to move, change in size, or are revealed sequentially.
Note:
All transition method examples have 5 second message hold times.
Hometown Grocery
Large Avacados
5 FOR $5


Level 4 Transition Method:
Full motion video or
constant animation
Hometown
Grocery

Regulatory Issue #3 – Transition Method

- ***Regulatory Considerations***
  - After evaluating options, have a discussion about what works best for your community
  - Keep in mind that there may be distinctions in permitted transition methods based on zoning districts
    - Downtown Districts
    - General Commercial Districts
    - Highway Commercial Districts

Regulatory Issue #3 – Transition Method

- ***Regulatory Considerations***
  - Use definitions when describing permitted or prohibited transition methods

> E. TRANSITION METHOD or FRAME EFFECT – a visual effect applied to a MESSAGE to transition from one MESSAGE to the next. TRANSITION METHODS include, but are not limited to the following:
>
> (i) DISSOLVE – a Frame Effect accomplished by varying the light intensity or pattern, where the first Frame gradually appears to dissipate and lose legibility simultaneously with the gradual appearance and legibility of the second Frame.

  - Be careful to revise traditional language that may conflict with the proposed EMC sign provisions

Regulatory Issue #4 – Transition Duration

- Transition Duration
  - How long it takes the transition method/frame effect to go from one message to the next.
- Regulatory Considerations
  - Keep transition to one second or less to minimize community complaints.

Regulatory Issue # 5 - Area of EMC

- Some jurisdictions choose to limit the square footage of EMCs differently than static signs
- This is often a result of a ‘That One Sign’ concern

Regulatory Issue # 5 - Area of EMC

Considerations

- No different than static signs in same zoning district

- Vary the allowable square footage based on the zoning district
  - Neighborhood districts more restrictive
  - General Business less restrictive

Regulatory Issue # 5 - Area of EMC

Usually at least 50% or more is needed to allow for logo, call to action & imagery.

Regulatory Issue # 6 – Regulating EMC's post Reed vs. Town of Gilbert

- Content neutrality is essential now
  - Color limitations
  - Alphanumeric limitations

- Time, Place and Manner

Another Key Consideration: *Where* EMCs Are Allowed

- Restrictions are almost always based on ‘That One Sign’ concerns
- Consider the zoning district:
  - What EMC regulation will change based on district (are they allowed at all, size, use)?
  - Will the sign be across from or adjacent to residential areas?
- If brightness is properly regulated, digital can be within a few hundred feet of residential with no ‘dancing lights’

Proximity to Residential Zones

General Considerations

- **The community must engage businesses and users as much as residents.**
- **Education and visualization is key for community education on EMCs.**
  - Utilize images and videos (good and bad)
  - Use local or regional examples as much as possible
  - Have information on the various studies on safety
  - Economic studies / impacts of regulation

Initiating Change

- **A business may be the one to get the ball rolling**
- **Take a proactive approach**
  - Preparation is key
  - Meet with residents, businesses and sign representatives to find out what are the issues (brightness, timing, appearance, etc.?)
  - Offer to facilitate an educational meeting with the elected and planning officials and/or the public
  - Important to engage a stakeholders group on sign changes

Planning and Zoning Considerations

- **Education and illustration**
  - Easiest way to dispel most EMC myths and engage the public before any hearings
  - Use videos and illustrations as much as possible
- **Understand the issues**
  - Focus on the sticking points for EMCs
  - Most likely related to the issues discussed today
- **Consider the zoning district:**
  - Will EMC regulation will change based on district?
  - Will the sign be across from or adjacent to residential areas?

Planning and Zoning Considerations

- **Do not suggest copying legislation outright**
  - Every community is different – cannot copy and paste
- **Model regulations are available**
  - While a community should not copy outright, they are full of useful definitions and guidance for drafting new regulations
- **Recommend special administration options**
  - Prior to permit issuance, signed acknowledgement of the required EMC regulations

Planning and Zoning Considerations

- **Avoid color-based or text-based regulations**
  - Could be 1st Amendment issues related to content neutrality
  - Lanham Act/Trademark infringement issues
- **Test your regulations**
  - Sometimes the best intentions do not work out when put together in ordinance language.
  - Fixed square footage or % of total sign area may have pitfalls depending on adjustment for zoning districts and setbacks.
  - Pick some sign examples in the community and theoretically test the requirements.

Finding Common Ground

- ***Understanding the Impact on Digital Sign Users***

Economic Impacts of LED Signs

Understanding The Economic Value of On-Premise Signs

Presented at National Signage Research and Education Conference (NSREC) – October, 2012

Economic Impacts of LED Signs

UNIVERSITY OF Cincinnati

Chuck Anderson

BlueOval Certified

FORD MERCURY

- Car dealer outside of Kansas City
- Added EMC March, 2011
- Goals:
  - Increase auto sales, and increase service work
  - Enhance dealership's reputation in the community
- Signage strategy:
  - 70% advertising for new car sales and service
  - 30% civic event promotion
- Economic Impact:
  - 30% increase in auto sales
  - 80% increase in service work

Impact on Multi-Tenant Retail

- Gives better visibility to *all* tenants.
- Makes sign easier to read
- Makes shopping center retail space more marketable.

The Impact of EMCs: City of Centennial, CO

Community-at-Large Benefits

1. They increase sales tax revenue.
2. They reduce blight by making businesses more viable.
3. They can reduce sign clutter.

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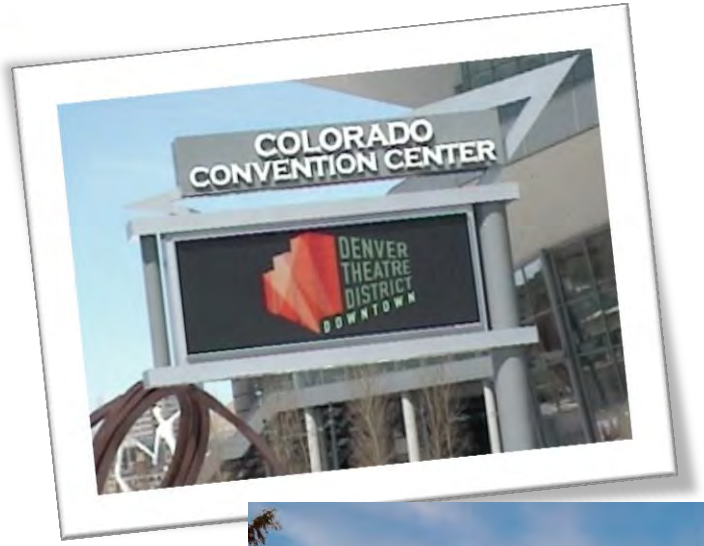
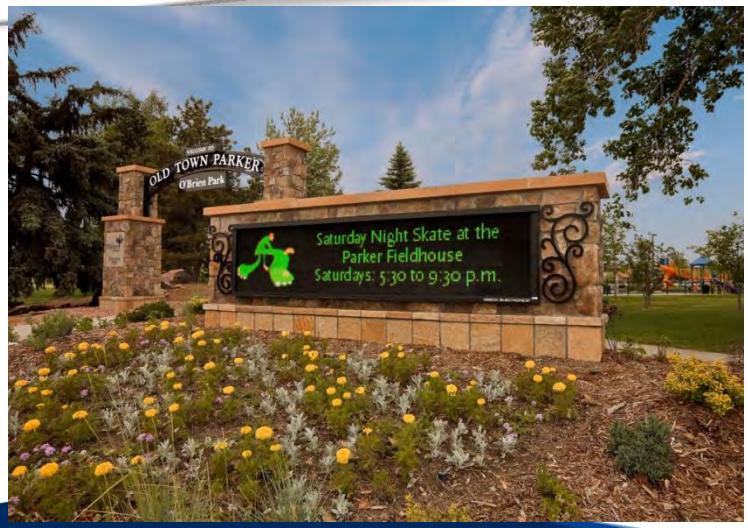
Community-at-Large Benefits





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3. They can reduce sign clutter.
4. They make unreadable signs readable.
5. They almost always look better than static readerboards.
6. They can communicate Public Service Announcements (PSA's).
7. They can be a symbol of community vitality.

Questions?

Contact:

Mike Freeborg
Clarity Forge Consulting, LLC
(303) 748-6712
mfreeborg@clarityforgeconsulting.com

James Carpenter, AICP
International Sign Association (ISA)
(480) 773-3756
James.carpentier@signs.org