

Improving DMS Message Legibility

Lessons from the Field



Steve Metcalf
Skyline Products

Why is DMS Message Legibility Important?

- Effective communication with motorists is a DOT agency responsibility
- Delivering legible messages is key to fulfilling this responsibility



Motorists Complaints About DMS

1. “Nothing important to say”
2. “They flash nuisance messages while our crumbling bridges go unfixed”
3. “Not legible until 50 yards away”
4. “They never seem to be on when there is a problem”



Agency Complaints About DMS

1. “30 minutes to change the message on 9 signs”
2. “Sometimes whole letters or whole words would stick”
3. “Not even a year went by, and you couldn’t keep those signs alive”
4. “There were times when our credibility was damaged”
5. “We need to KNOW that the message is getting out to the public”

Improving DMS Message Legibility



What is VMS message legibility?

Types of DMS

Message Legibility

Readability

- Appropriate brightness
- Character size and spacing
- Sign placement
- Design to provide contrast
- Clearly written messages



Types of DMS

Message Legibility

Reliability

- DMS reliability
- Is the sign functional even when not in use
 - “Does it work when you need it?”
- DMS software capability
 - Preventative capabilities – You know before it becomes a problem



Types of DMS Message Legibility

Credibility

- Accurate messages
- What does the sign actually say
- Is the message up now
- “How do you know what is really being communicated to your traveling public, if anything at all?”





Case Studies: Brightness and Legibility Distance

1. “Our previous signs had no punch...”
2. “I want to read, understand, and comprehend the message in enough time to react...”
3. “If you can’t read them, what’s the point?”



Case Study: Accurate Feedback on Message and Pixels

**VAIL PASS
CLOSED**

Case Studies:

Maintenance Issues

1. “The technology is from France, that’s a long way to get parts”
2. “Sometimes whole letters or whole words would stick”
3. “Not even a year went by, and you couldn’t keep those signs alive”
4. “There were times when our credibility was damaged”



Case Studies:

Software Capability

1. “Received telephone bills for \$4000 per sign”
2. “Had 4 computers and 4 software packages”
3. “30 minutes to change the message on 9 signs”
4. “Ice storm: Could quickly display message on all signs”

Case Study:

Recurring Themes

- DMS reliability
- Message confidence
 - Reliability of the DMS
 - Credibility of Message
- Impact to the agency
- Impact to the public



Other Legibility Issues

- Viewing time per page
- Characters per line
- Interline spacing
- Cone of vision
- Character size





Questions?

Steve Metcalf

(800) 759-9046

(719) 684-5991 mobile

www.SkylineProducts.com

SteveMetcalf@SkylineProducts.com