

Moving at the Speed of Life



3M *Innovation*

Arriving Late Offers No Second Chance

Motorist suffers disabling chest pains and loses control of vehicle.

5:54 p.m.

Eyewitness calls 911 on cell phone.

5:55 p.m.

Police, paramedic and fire services are dispatched.

5:56 p.m.

Motorist is helped from car and goes into cardiac arrest.

5:57 p.m.

Emergency response services thread their way through rush-hour traffic.

5:58 p.m.

Blood and oxygen levels progressively drop. CPR is begun by a passerby.

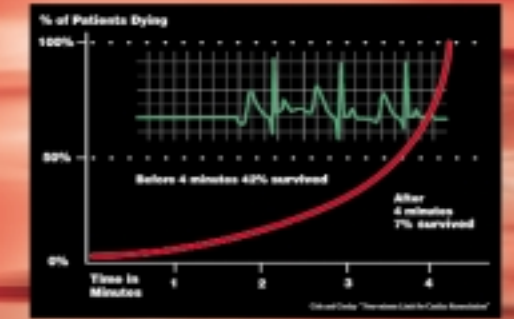
5:59 p.m.

Blood pressure continues to fall; anoxic brain damage is imminent.

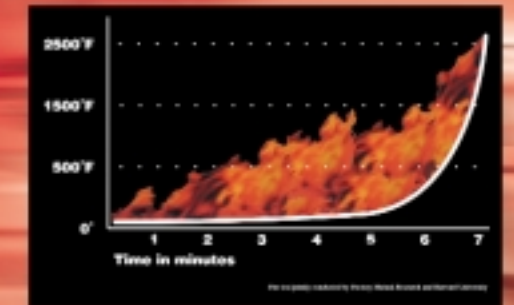
6:00 p.m.

Heart stimulating drugs or defibrillation are critically needed if person is to recover.

6:01 p.m.



Cardiac Arrest



Flashover

The Time is Short . . .

Three to four minutes for someone in cardiac arrest¹ . . .

Six to seven minutes before an unattended fire can burst into flashover.² Emergency personnel must get there in time.

1. Cole and Corday, "Four-minute Limit for Cardiac Resuscitation".
2. U.S. Department of Commerce, National Institute of Standards and Technology.

Every Second of Delay Compromises Response, Multiplies Fire Loss . . . Threatens Life.

Doctors refer to it as that first "golden hour" when full medical aid can make the difference. And that's why 911 exists: to improve response.

There is a 911 Enhancement That Focuses on Delivering Services More Quickly and More Safely.

It can save valuable minutes because it optimizes that part of an emergency response over which police, firefighters and paramedics have traditionally had the least control . . . traveling to the scene.

It's More About Quickness Than Speed

Call-in alerts traffic monitors to focus attention on crash site.

5:55 p.m.

CALL IN

Emergency response teams are selected and dispatched.

5:56 p.m.

DISPATCH

Emergency vehicles gain temporary green-light right-of-way within timing parameters set by traffic engineering.

5:57 p.m.

Traffic up ahead clears with the green light, opening a path for emergency vehicles.

5:58 p.m.

TRAVEL

System logs information by intersection for use by traffic engineering.

5:59 p.m.

ASSIST

Emergency team arrives at the scene; cross traffic activity is normal in the wake of responding vehicles.

6:00 p.m.

Signal progression returns; the traffic center has flow information available and records of the event.

6:01 p.m.

The 3M™ Opticom™ Priority Control System can enhance time-critical travel. It allows emergency vehicles to request and receive green lights, as needed, intersection by intersection, as they go to and from the scene. This gives police, fire and medical personnel several advantages:

Every 911 Response has Four Stages:

1

Receive Incoming Call

2

Dispatch Resources

3

Travel to the Scene

4

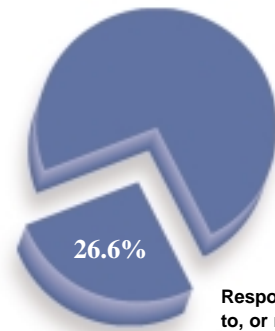
Administer Aid and Return

Respond More Quickly.

During most emergency runs an Opticom system can reduce response times — often by 20%³ — giving emergency services precious additional moments to stabilize the situation.

Protect Lives and Property.

The sooner responders can reach and control a scene, the better . . . to administer medical aid, suppress fires, diffuse conflicts, manage scenes.



Responding to, or returning from, alarms⁴

Firefighter Deaths by Type of Duty

Travel More Safely.

The system provides the safest possible situation: a green light for emergency vehicles that appears normal and natural to all other traffic. This also reduces stress for everyone concerned.

Reduce Public Liability.

The Opticom system helps lower the risk of accidents and the litigation they can produce.

Protect Community Costs.

Emergency vehicles reduce their stop and go driving. This can decrease vehicle wear, especially brakes. Potential service life increases.

3. City of Houston Emergency Response Management System Study, 1990

4. July/August 1998 NFPA Journal.

Every Second Counts, Every Delay Matters

*The emergency vehicle
EMITTER broadcasts
data and encoded infrared
communications to
upcoming intersections.*

*The DETECTOR at
the intersection
receives the infrared
communication and sends
an electronic message to
the phase selector.*

*The PHASE SELECTOR
validates the signal and
requests a green light
from the controller, giving
the emergency vehicle
an efficient, natural-
appearing right-of-way.*

The 3M™ Opticom™ Priority Control System provides positive guidance for emergency vehicles and sustains flow control for traffic engineering. It custom-fits each intersection to meet the needs of community, emergency agencies and traffic management.

The system delivers predictable control, security against unauthorized use and useful management information.

An integrated solution, the system supports public safety, public transportation and public works agencies to avoid conflict or confusion.

How the System Works

At the flip of a switch, the emergency vehicle driver broadcasts encoded infrared communication that contains both data and frequency information. The infrared transmission is received by each upcoming traffic signalled intersection, validated for authorization and sets in motion a request for a green light. This occurs in an orderly, highly structured procedure that accounts for cross traffic, pedestrians in crosswalks and traffic engineering requirements.

The emergency vehicle gains right-of-way in a manner that appears normal. All other traffic responds predictably and without confusion to this natural transition.

The Opticom system is directional. It goes only where the emergency vehicle goes without disrupting parallel intersections or unnecessarily delaying cross traffic.

Why the System Works

The Opticom system is proven by years of service in tens of thousands of intersections across hundreds of cities offering millions of trouble-free responses.

3M takes pride in its 55-year commitment to traffic control and management. An advocate for effective solutions, 3M provides an array of supports and services including:

- Matched componentry for superior, time-tested performance
- A certified dealer network for expert, local assistance
- Custom programs to meet your specifications and needs
- Five and 10-year guaranteed warranty/maintenance
- Driver preparation and comprehensive training materials
- Financing at competitive interest rates tailored to your jurisdiction needs.

Put simply, 3M provides the technology, the expertise and the commitment to partnership in public safety. The Opticom system delivers vital services, quickly, to protect all citizens for the benefit of everyone, everywhere in the community.

For more information or answers to your questions, please call us at 1-800-328-7098.

3M Innovation



Transportation Safety Research Center

Visit our Transportation Safety Research Center, one of the largest, most advanced outdoor lab and field test facilities dedicated to traffic management and control products.

Important Notice to Purchaser

THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

3M will repair or replace any Opticom® Priority Control System component found to be defective in materials or manufacture within five (5) years from the date of shipment from 3M. See "Summary of Warranty/Maintenance Coverage" for details and limitations of the coverage plan. This warranty shall not apply to incandescent lamps (confirmation lights) or to any system component which has been (1) repaired or modified by persons not authorized by 3M; (2) subjected to misuse, neglect or accident; or (3) has been damaged by extreme atmospheric or weather-related conditions.

In no event shall 3M be liable in contract or in tort for any injury, loss, or damage, whether direct, indirect, incidental, special or consequential, arising out of the use or inability to use the Opticom system or any component thereof. THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE.

3M has designed, developed and tested each Opticom priority control system component as part of a matched component system. 3M makes no warranty whatsoever concerning the reliability or safety of Opticom system components when used with non-Opticom system products. 3M shall not be responsible for any Opticom component which 3M determines has been damaged in whole or in part by its use with a non-Opticom system product.

Sale and use of the Opticom priority control system is expressly restricted to authorized agencies of government customers, within their respective jurisdictions. However, because the optical signal generated by the Opticom system is not exclusive, 3M cannot ensure exclusive activation by purchaser. Authorized users who desire to use or coordinate use of the Opticom system with that of other jurisdictions must first obtain the prior written approval of each authorized user in the jurisdiction where use is sought.



Intelligent Transportation Systems 3M Safety and Security Systems Division

3M Center, Building 225-4N-14
St. Paul, MN 55144-1000

1-800-328-7098
1-800-224-2085 fax

651-575-5794
651-737-1055 fax

<http://www.3M.com/its>

3M Canada Company

P.O. Box 5757
London, Ontario, Canada
N6A 4T1

1-800-3MHELPS
519-451-2500



Printed on Recycled Paper,
including 40% Pre-consumer, and
10% Post-consumer waste.

Printed in U.S.A.
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