

Paper No. 4010
Author: John Simpson
Affiliation: Class 7 Ltd

Communication in the Google Age

Abstract:

Purpose

To consider the most effective means of communicating safety and security critical information in respect of radioactive material transport.

Initial review

An appraisal of the methods and resources currently employed to pass information related to the safe and secure transport of radioactive material to those who have a need to know and to understand the workings of the system. Account will be taken of a broad range of regulatory and modal controls but for the purpose of clarity the IAEA publication SSR-6 and the UNECE ADR Agreement will be the primarily utilised texts.

Target audiences

Those who need to communicate, to know and to understand the requirements of the various systems will be summarised as:

Regulator to Regulator

Regulator to risk generator (Consignor)

Consignor to Carrier

Regulator, consignor, carrier to intervention agents

An opinion concerning the current effectiveness of communication

From more than thirty years experience related to the teaching and communication of safety and security matters concerning radioactive material transport it will be argued that there are basic areas of control that present major challenges of understanding to a wide range of people who are involved in this industry. The provision of container warning information across a selection of transport modes and geo-political regions will be used as an illustration of the potential for mis-understanding.

The case for a broader utilisation of resources

Examples will be shown of communication resources based much more on images and somewhat less on text than the systems presently utilised. It will be argued that systems which were entirely appropriate for a close-knit, science-based, fledging industry in the 1950s must be updated. To meet the demands of the age of the Global Village where detailed cradle-to-grave care is the watchword, an industry that is ever-expanding into new operational and geographic areas cannot rely primarily on the written word to communicate essential safety and security information.

Introduction

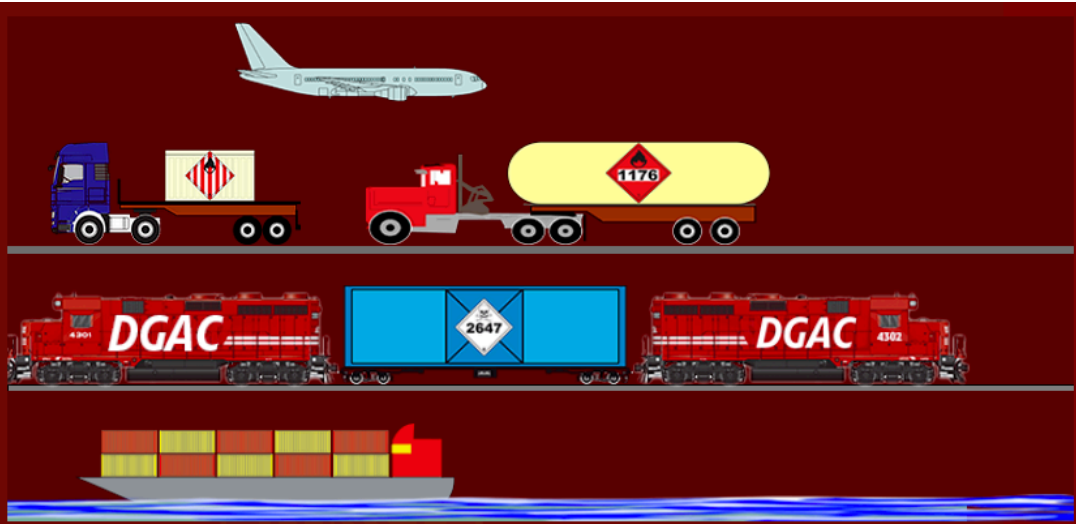
Existing regulatory resources achieve certain necessary objectives but fail to fulfil some of the most significant purposes for which they are responsible.

The Dangerous Goods Communication Network

A consideration of the parties that need to understand the requirements of dangerous goods regulations that are related to transport safety and security.

The relevant parties are summarised as shown overleaf:

COMMUNICATION IN THE GOOGLE AGE
DG COMMUNICATION NETWORK
GLOBAL COMMUNICATION NETWORK
DG COMMUNICATION OPTIONS
PARTIES INVOLVED
SYSTEMS UTILISED
SYSTEMS NATURE



- UN transport related agencies
- National governments
- Regulators
- Risk generators (Consignors)
- Handlers
- Carriers
- Intervention agents
- Enforcement agents

The systems utilised to operate the communication network are summarised below:

COMMUNICATION IN THE GOOGLE AGE
DG COMMUNICATION NETWORK
GLOBAL COMMUNICATION NETWORK
DG COMMUNICATION OPTIONS
PARTIES INVOLVED
SYSTEMS UTILISED
SYSTEMS NATURE



- IAEA SSR-6
- UN Model Regulations
- International modal controls
- Regional modal controls
- National modal controls

The broad nature of the communication systems that are used is summarised below:

COMMUNICATION IN THE GOOGLE AGE

DG COMMUNICATION NETWORK

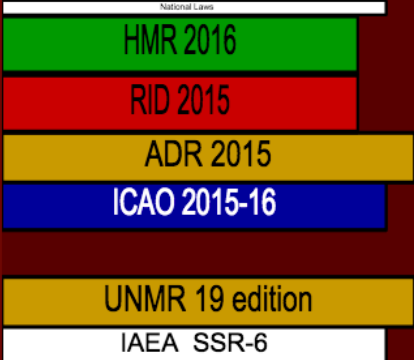
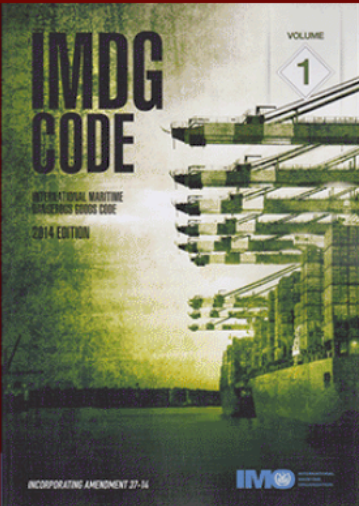
GLOBAL COMMUNICATION NETWORK

DG COMMUNICATION OPTIONS

PARTIES INVOLVED

SYSTEMS UTILISED


SYSTEMS NATURE

IMDG Code

501 pages
88 images

38 labels
32 -



Large texts

Modest use of visual support

IAEA SSR-6

IMDG Code

The Global Communication Network

An assessment of the composition of the parties that comprise the network is exemplified below:

COMMUNICATION IN THE GOOGLE AGE

DG COMMUNICATION NETWORK

GLOBAL COMMUNICATION NETWORK

DG COMMUNICATION OPTIONS

PARTIES INVOLVED

SYSTEMS UTILISED

SYSTEMS TARGETS

SYSTEMS NATURE



UN transport related agencies

National governments

Regulators

Risk generators (Consignors)

Handlers

Carriers

Intervention agents

Enforcement agents

The generally preferred methods of communication are as shown below:

COMMUNICATION IN THE GOOGLE AGE			
DG COMMUNICATION NETWORK			
GLOBAL COMMUNICATION NETWORK			
DG COMMUNICATION OPTIONS			
PARTIES INVOLVED			
SYSTEMS UTILISED			
SYSTEMS TARGETS			
SYSTEMS NATURE			

Mobile phones
e-mail
Facebook
Twitter
Internet
Land lines
Fax
Written procedures

The parties that are the routine targets of regulatory requirements are as shown below:

COMMUNICATION IN THE GOOGLE AGE	
DG COMMUNICATION NETWORK	
GLOBAL COMMUNICATION NETWORK	
DG COMMUNICATION OPTIONS	
PARTIES INVOLVED	
SYSTEMS UTILISED	
SYSTEMS TARGETS	
SYSTEMS NATURE	

The global village
Consignor team
Handler team
Carrier team
Responder teams
Minimal time message delivery
Precise message delivery
Rich content to hold attention

The nature of the communication systems used to convey safety and security critical messages may be summarised as:

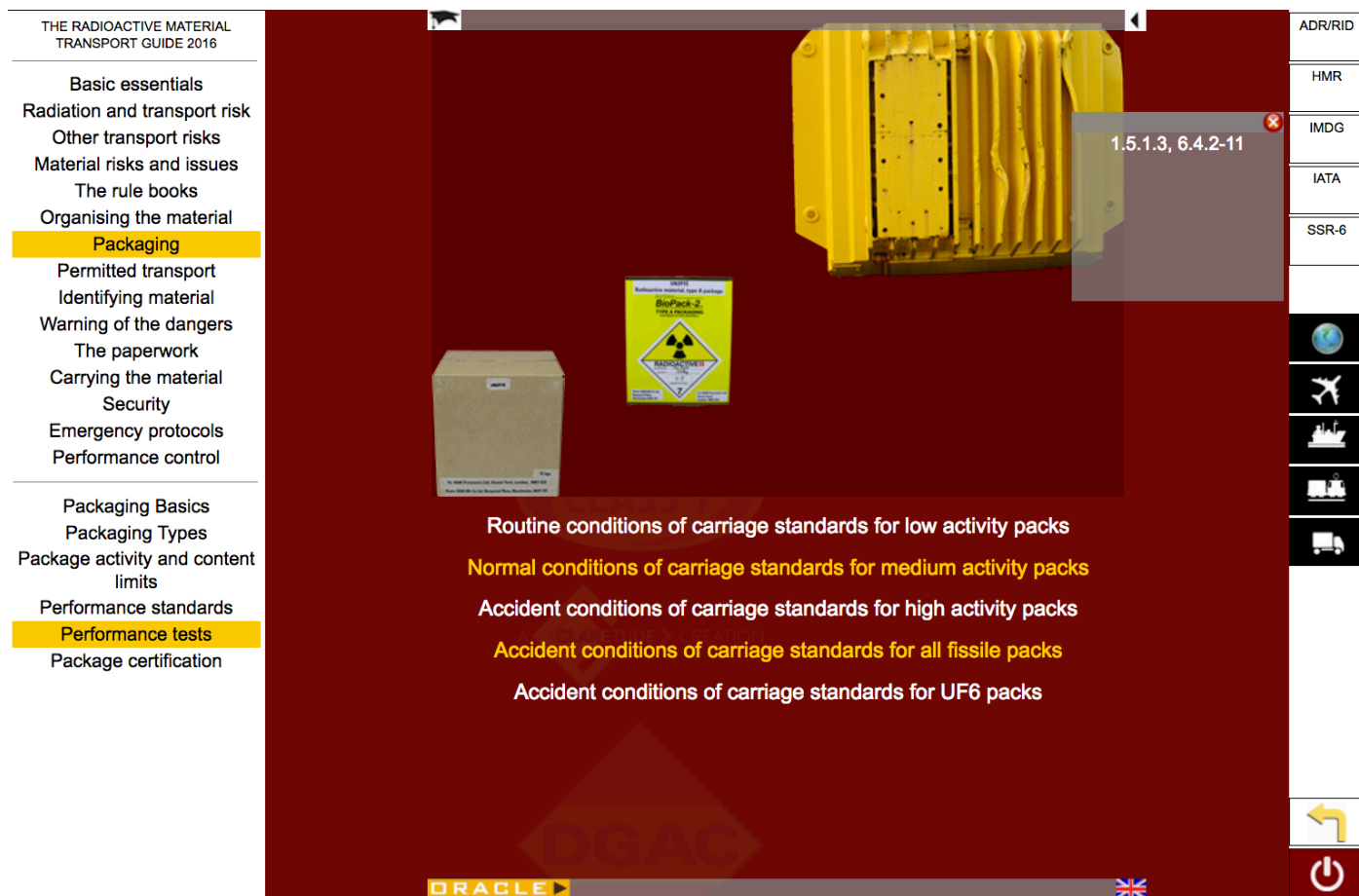
COMMUNICATION IN THE GOOGLE AGE	
DG COMMUNICATION NETWORK GLOBAL COMMUNICATION NETWORK DG COMMUNICATION OPTIONS	
PARTIES INVOLVED SYSTEMS UTILISED SYSTEMS TARGETS SYSTEMS NATURE	Text Oral Visual

Dangerous Goods Communication Options

Communication of transport safety and security critical messages can, and in some regards must, continue to be based upon the existing traditional document based systems. They have characteristics that may be summarised as shown below:

COMMUNICATION IN THE GOOGLE AGE	
DG COMMUNICATION NETWORK GLOBAL COMMUNICATION NETWORK DG COMMUNICATION OPTIONS	
Tradition maintained New media utilisation New media opportunities	Required for legal clarity Time and cost to generate or revise Time and cost to understand Numbers of people who need to understand Potential for mis-understanding Language issues

However, the media systems that have developed in recent times offer opportunities to provide alternative message streams that are cheaper and easier to sustain whilst providing clearer messages that can be more quickly and effectively absorbed. The image below illustrates how several messages can be simultaneously delivered in an organised and attractive manner.



The left of screen navigation panel ensures that the user can readily keep track of the particular subject that is being addressed; the centre image is a short movie that in this example screen represents the drop test requirements for the different package types; the headlines below the movie panel provide basic messages related to the subject of study.

Clicking a headline introduces a screen providing a more detailed explanation of the headline topic. Clicking the boxes at the top right identifies regulatory references relevant to the subject of study; the icons below show which geographic or political regions and which modes of transport are covered by the study topic.

Clicking the mortar board bar at the top of the screen reveals an optional awareness test question related to the subject. When relevant, the flag at the bottom of the screen identifies the language being used and clicking it switches the screen to the alternative language registered for the user.

That represents a great deal of information. The compiler of a book would find it a major challenge to present this range of knowledge in an attractive user-friendly manner.

Conclusions

Electronic communication systems can be used to provide more effective message delivery in a manner that the population at large have demonstrated to be their everyday method of preference. Once created, sustaining and revising the content can be conveniently achieved at much reduced cost and in much reduced time frames.