

Man-made Signals : How it all Began

Understanding Road Signs in Bangladesh

by Tanzina A Rahman

AGES ago, man created symbols for communicating with his world. These early communications were probably non-verbal, in the forms of chants, dances, postures, gestures, varied tones of voice etc. Eventually different human groups created a variety of symbols, including the linguistic symbols of language, to transform the world around them into a symbolic cultural world of meanings and of patterned conduct for group living. Now, after all these centuries of development from pictorial symbols to pure writing, we are again approaching an age of symbolism. Once again we begin to recognize the wisdom of bygone periods, when so much less was known, and communication so simple.

Symbolic expression in the circulation system

A road is a public structure, as is a city hall or assembly building. If we have a right to demand good design, comfort, safety and order in our public buildings, we should also demand those in our roads. Transportation routes are one of the major aspects of city and regional planning. A city, with beautiful buildings designed by great architects, lots of open spaces, greenery etc. will still be a disaster if the circulation isn't designed properly. Now, even where the transportation routes are well-designed, the circulation itself may still end up in chaos. This generally happens when there is a lack of regulation and control of the traffic. Since it is impossible to go over and talk to each and every person walking or driving in the streets, and try to explain to them the rules about where they should or shouldn't walk, drive, park, turn, stop, speed up, slow down, blow horns and whatever, this job is generally assigned to the signs and symbols of the roads. It's a much more convenient way. It reaches every passer-by, whether driving or walking.

Ideally, by means of signs a newcomer should be given all the information which the regu-

lar user has acquired by experience. Each item of information should come at the right time, not too early nor too late. A driver should be able to perceive, read and understand the signs and then take necessary action with safety; he should not divert his attention from driving.

The need for standardization of road signs

In our country, traffic signs are usually placed on sidewalks in the form of geometrical shapes, placed on single vertical pole. But the most important properties of the signs are completely overlooked: there are no regular codings regarding the shapes and colours of the signs and symbols, their size, height, location, legibility, necessity and so on. In Europe, there are definite codes regarding the shapes, colours and proportion of different signs and symbols. These codes are followed everywhere. So, a person can readily understand from a distance what the purpose of the sign is, and also its importance.

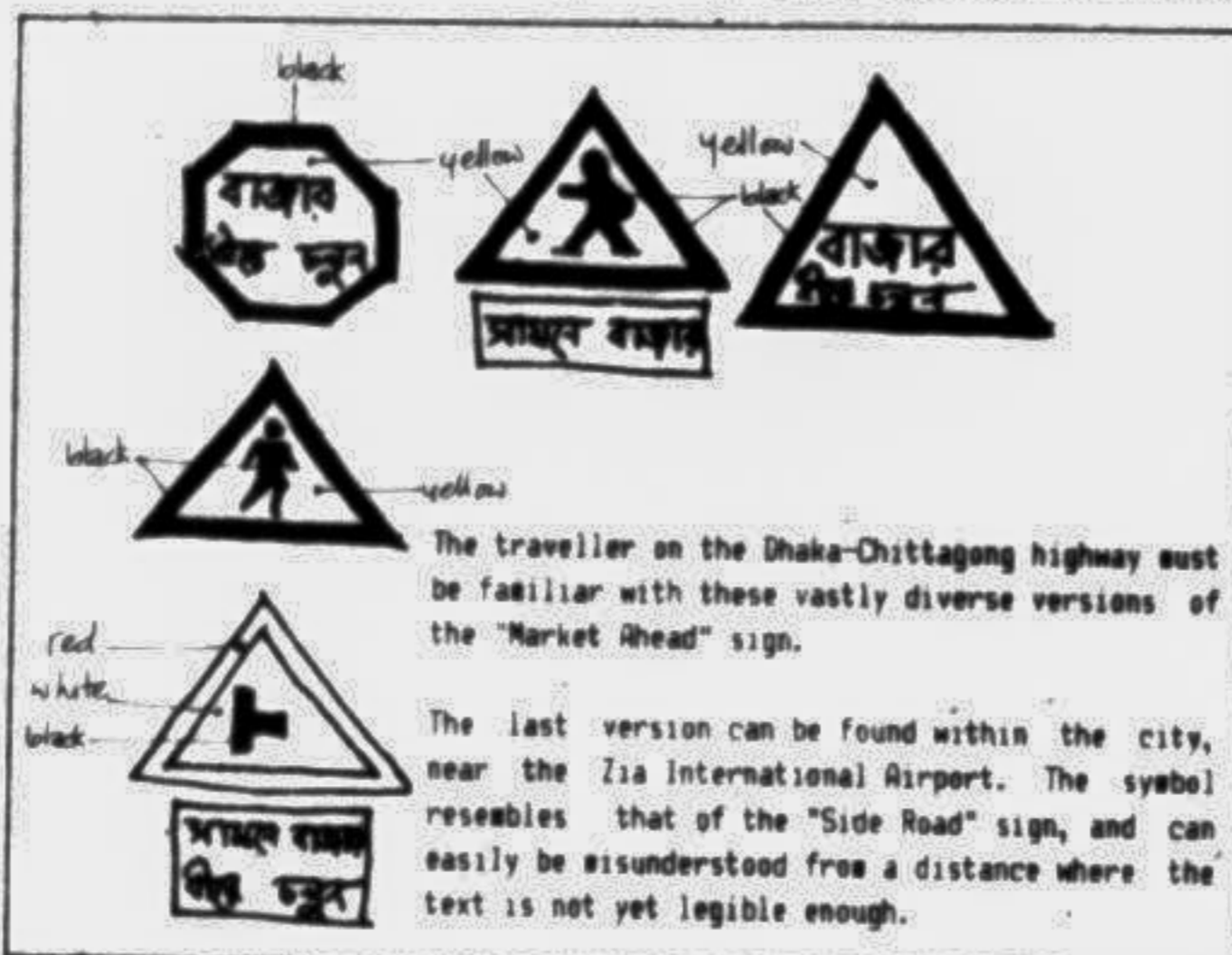
Standardization doesn't necessarily mean that we have to follow the European coding system in Bangladesh. Symbols may vary from society to society, but within the country only one coding system should be followed.

A symbol must be "group-recognized and commonly used," either by tradition or, if it is newly created, by general acceptance. Knowledge and acceptance of a symbol's meaning is therefore a prerequisite of its effectiveness. We may express this in other terms: a "message" will fail if the "sender" uses symbols which the potential "recipients" have not learned or have refused to accept.

Now, we will be wrong if we assume that symbols which appear self-explanatory to some of us must be equally self-explanatory to others. This is especially true when people of differ-

ent social and cultural backgrounds are concerned. Familiarity may help in instant recognition, but we need proper standardization to fulfill both

signs, where very simple and obvious symbols could have been designed. The height of the poles vary greatly in the highway signs, most of the time be-



the requirements, viz conveying the correct message and recognition of it by the user.

Road signs in Bangladesh

There is no standard code governing the signs in our country. There is no definite code of colour, shape, size, symbol or even the text or message for a particular sign (e.g. the "Market Ahead" sign) — leave alone a whole class of signs (e.g. warning, prohibitory, informative etc). Often signs are located in wrong places. One such example is the horizontal "Pedestrian Ahead" sign, placed on the road divider island at the crossing itself, whereas it should have been placed at a sufficient distance from the crossing as a general rule for warning signs. Another such example is the use of the "No Right Turn" signs at the corners of the roads at large circular islands (e.g. at the two circles of Gulshan), where the sign really means "No U-Turn". There are a lot of locations within the city where U-turns are prohibited, but where there aren't any "No U-Turn" signs. There is a lack of use of symbols in many

coming very low. But the opposite should have been the case. Trucks, buses and heavy vehicles drive at tremendous speed on the highways, and the signs, specially the warning signs, are of extreme importance to them.

Since the heights of these vehicles are higher than the average heights of vehicles running in the city, the signs on the highways should also be higher. Because of the speeds of the vehicles, the signs should omit unnecessary text from signs whose symbols are readable without the help of words.

Basic requirements of the road signs

First of all it is required that the design of signs should be as simple as possible, omitting unnecessary details which will only add to the confusion of understanding the signs. The basic considerations governing the design and location of all signs are that they should be —

Sufficiently striking to attract the driver's attention; legible at long range, understandable at a glance, sited so as to leave the driver sufficient time

to take the necessary action safely, provided with an effective system of illumination or reflectorization for visibility at night.

The individual qualities of the signs which will directly determine the codes are: Shape, colour, size, symbol, text, location, legibility.

Standardizing the road signs of Bangladesh

Before we can start designing a standard format, we need to know a few things which will help in the decision-making process. We must also keep in mind that most of the people in Bangladesh are illiterate. So there should be symbols instead of words wherever possible. But then again, the symbols should be simple and understandable by the general public. A sign must be noticed and recognized before it can be read, otherwise part of the legibility distance is lost. All signs must be designed and sited to provide adequate visibility.

Common impediments to visibility are road curvature, the masking by other vehicles, by hedges, trees and herbage in rural areas, and by street furniture and shop awnings in urban areas. At night, competing forms of lighting may render a sign virtually invisible, particularly in urban areas.

The first job would be to classify the signs into a few broad categories, and then find out which sign belongs to which category. The classification could be as follows:

Warning, regulatory, mandatory, prohibitory, informative, information, direction. Among them, warning signs are the most important, regarding the safety on the road, and therefore should be the most attractive in shape, colour, location etc. Then come the regulatory signs, and lastly, informative.

This article is contributed by the Post Graduate Centre, Architecture Department BUET.

Papua New Guinea Goes for a Spaceport

by David Robie

PAPUA New Guinea hopes to be the world's first commercial spaceport will be set up on a remote island in the north of the South Pacific country.

Prime Minister Pias Wingti has approved an international consortium's plan in principle, even though the financial backers failed to find funds for a similar project at Cape York in neighbouring Australia.

The \$960 million scheme is believed to be planned for a small island near Kavieng in New Ireland. Government officials are not specific about the actual site. But enthusiasm is high. Said Wingti: "If we pull this one off, it will be the biggest achievement of this government — of any government. It will really put PNG on the world map."

Former Queensland premier Mike Ahern, chairman of the Australian-based consortium Space Transportations System (STS), is confident the project will go ahead in spite of the earlier Cape York plan being aborted. Said Ahern: "We wouldn't be proceeding with PNG if we weren't confident about our abilities."

Ahern insists the project would benefit Australia and PNG by promoting employment opportunities on both sides of Torres Strait, the

channel separating the two countries. While the PNG government is also confident, many community leaders are sceptical

about the benefits from such a developing country with just 32 per cent literacy, serious infrastructure problems and no road transport link between the capital, Port Moresby, and the rest of the nation.

Critics claim the plan is irresponsible and that the government should concentrate on solving serious national shortages.

The government has given the spaceport backers until the end of this year to come up with the money and a viable detailed plan.

Talks are still sensitive, with STS currently trying to negotiate with a group of European Community banks in an effort to find some of the hard cash. The plan would pitch PNG into competition with major space technology countries such as the United States, Russia, France and China and other nations such as Brazil, India, and Japan.

It also makes PNG a rival for Australian interests which are keen to establish the first spaceport in the South Pacific region.

Under the draft plan agreed by the government, the spaceport would be built, owned and operated by a consortium of

would probably undercut existing services.

The STS consortium includes the firm managing the project, Australian Construction Services, a corporation created out of the former federal Department of Works; technical experts Kaiser Engineering Australia — an offshoot of an American civil engineering firm; quantity surveyors WT Partnership of Brisbane; accountants Brnst and Young; legal advisers Sly and Weigall, Cannan and Petersen; and environment impact consultants Hollingworth Dames and Moore — a US company involved in the American national space agency NASA.

A consortium spokesman says STS lost its mandate to build the spaceport at Cape York in May last year after the Queensland government ran out of patience. He said \$5 million had already been spent on research and much of this data could be transferred to PNG.

The spaceport would be designed and operated only to meet the needs of the commercial space industry for peaceful purposes, says the consortium. International control measures would be put in place to ensure there are no military implications.

If the PNG government gives the final go-ahead, the spaceport is expected to take three years to complete. The first commercial spacecraft could be ready by mid-1997.

The launch complex would include vehicle assembly buildings, three launch pads, service towers, fuel storage, launch control centre, telemetry and ground support centre. Further development would allow for re-entry capabilities for space planes of the future.

Little has been said so far about a share for landowners, a sensitive issue for many of PNG's strategic resource development projects.

Once the spaceport is operating, say STS officials, the area could be transformed into a tourist centre with hotels, airports, a hospital, and golf courses and other recreational facilities.

Plans include the development of a space science industrial park, international museum and a space university campus.

— GEMINI NEWS



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Star Special

Computer

Information superhighway

Communication by the year 2000

WASHINGTON, Jan 4: Americans at the beginning of the 21st century will no longer have televisions, computers, facsimile machines or telephones, reports AFP.

Instead, a single piece of electronic equipment, as yet unnamed, will do everything, and connect household and businesses via millions of kilometers of fibre optic cable.

These information superhighways will provide 500 television channels, the latest films, huge amounts of data, incredibly realistic video games and every video Michael Jackson has ever made.

"To transmit the 33 volumes of the Encyclopedia Britannica between sites requires 13 hours today. With the new switching system, 4.7 seconds only," says Jane Patterson, policy advisor on the information highway project for north Carolina governor Jim Hunt.

US telecommunications giants, Media Networks and Computer firms have spent billions of dollars this year on the superhighway, which could revolutionize how Americans work, learn and play.

Vice President Al Gore, the highest ranking computer herd,

has got into the act, becoming the administration's point man for this new breed of technological wonders.

This means that in the year 2000, Americans wealthy enough to plug into the superhighway will begin their day by reading their favorite daily newspaper, transmitted electronically. They will also be able to check their bank account or do some on-line catalogue shopping.

Some workers may have a short commute to work from the breakfast table to a home computer linked to the office. Or, en route to work, executives will make notes on their personal digital assistant, a handheld computer that can be written on using an electronic pen.

Doctors in New York will be able to examine patients in far away California using "virtual reality," a glove manipulated in New York and capable of transmitting the information electronically across the nation.

Those Americans unbothered by a small, household size screen will never again have to call to find out what time their choice of movie is playing. Any movie or television show will be

available at any time.

The device will also be interactive. Viewers will be able to instruct the camera to focus on their favorite player during sports events or change the script of a film while it is underway.

The potential market value of these marvels is huge although dollar estimates vary greatly. Former Apple CEO John Sculley put it at 3.5 trillion dollars over a decade.

Masashi Kojima, president of Nippon Telegraph and Telephone, agreed. "Multimedia will become a major trigger in reactivating the Japanese economy over the next three to five years," he said.

This new media could give the computer industry its second wind. Industries now are focusing on forming the mergers that will best position them for the future. Telephone companies, cable networks, computer manufacturers and film studios are scrambling for partners. The seven largest buyouts and investments in upgrades this year totalled 50 billion dollars.

On the job front, the first victims will be employees at music

shops, video rental stores and movie theaters. And there is the question of electronic rights. Already viewers cannot look at an electronic reproduction of a matinee without paying two bits to bill gates. The microsoft founder owns the electronic rights.

And if inter-activity can bring the most sophisticated libraries into the smallest towns, it also has the capability of turning entire households into glaze-eyed zombies.

Advertisers must also adapt because television viewers — already quick to zap boring commercials — could completely escape their control.

So far the average consumer has shown little interest in the new technology, probably because it offers only the most basic services.

Like all technological revolutions, the information superhighway's effect is difficult to evaluate in its early stages.

After all, Gutenberg only wanted to print the Bible when he built the first printing press. And Alexander Graham Bell was looking for a way to help the deaf when he invented the telephone.

Computing Bytes

Daily Star Awareness Course

by Yousuf M Islam

(Continued from last session)

Test Your Skills

1. Match each of the following terms with its definition.

- Term
1. Personal computer
2. Memory location
3. ALU
4. Main control unit
5. CPU
6. Printed hard copy



A Gateway 2000 Hand Book 486

- 7. Data
8. Information
9. Software
10. Programmer

Definition:

- a. A general term for computer programmes
b. Consists of the memory, ALU and the main control unit
c. Raw material that is input to a computer
d. Writes specific computer instructions
e. Performs arithmetic operations and comparisons
f. A microcomputer that is individually operated
g. Electronic circuit in which one byte can be stored
h. Controls all computer activities
i. What the computer outputs
j. What a printer produces.
2. Complete the following sentences:
a. A printer is an example of a _____ device.
b. Data is stored in the _____ when it is entered into the computer.
c. The printer is similar to the typing mechanism of an _____.
d. The floppy disc can be likened to a _____ and the floppy drive can be likened to a _____.
e. Devices connected to the CPU are known as _____.
f. Each key on a keyboard can be likened to a _____.
3. Label the following in the diagram below:
a. Input
b. Output
c. Information
d. Data
3 + 7 = 10

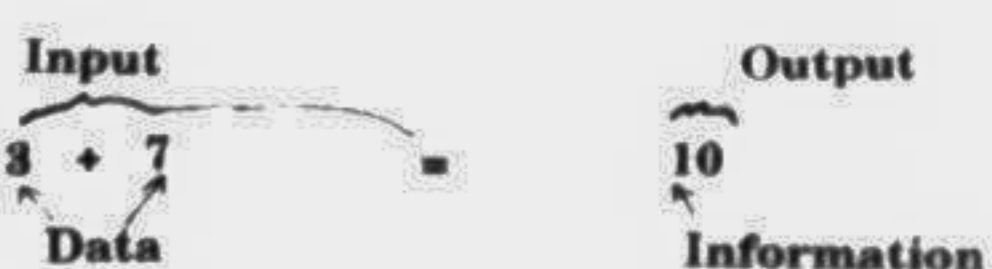
Test Your Skills: Answers

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- Term
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j 6. Printed hard copy
c 7. Data
i 8. Information
a 9. Software
d 10. Programmer

Definition:

- a. A general term for computer programmes
b. Consists of the memory, ALU and the main control unit
c. Raw material that is input to a computer
d. Writes specific computer instructions
e. Performs arithmetic operations and comparisons
f. A micro-computer that is individually operated
g. Electronic circuit in which one byte can be stored
h. Controls all computer activities
i. What the computer outputs
j. What a printer produces.
2. Complete the following sentences:
a. A printer is an example of a output device.
b. Data is stored in the RAM when it is entered into the computer.
c. The printer is similar to the typing mechanism of an electric typewriter.
d. The floppy disc can be likened to a cassette and the floppy drive can be likened to a cassette player.
e. Devices connected to the CPU are known as Peripherals.
f. Each key on a keyboard can be likened to a switch.
3. Label the following in the diagram below:
a. Input
b. Output
c. Information
d. Data



Cluster PCs for networking

by RN Sanyal

A PC cluster uses a small, high-band-width network to group together high-end computers or workstations to server as a high capacity extension of your existing network. While an Ethernet or token-ring network typically provides you with file and resource sharing capabilities, a PC cluster is used for problem — solving applications, making it more of a distributed system than a computer network.

When PC cluster used in your computers, then existing software runs on it without modification and programme can write new applications. It also saves you money.

PC cluster connects to the low-band-width client network through standard network interface on cluster machines, allowing the system on the client network to obtain access to cluster data.

Three key computers are necessary for building a PC cluster.
1) Any type of network that is capable of a sustained 100-Mbps data transfer rate, such as fiber-optic network.
2) You need a computer that has sufficient bus bandwidth to handle distributed CPU processing and to drive the network.
3) You must have software to control network and PC cluster data transfers. A 33-MHz 486-based computer increased in capacity with an IEEE 1296 bus would satisfy the computer criterion, but the PC cluster concept is applicable to a variety of microcomputer platforms operating in the client-server environment. IEEE 1296 bus, also called Multibus II.

PC Cluster (PCC) is a network design that creates a large server by linking workstations through a high-band-width network.

• PCC is a development platform for multiprocessor application that take advantage of high-speed networking.
• PCC is a high powered, high speed extension of your existing network that specializes in problem-solving applications.
• PCC can share a single key board, monitor and drive, a plus in terms of cost and ease of use. Cluster PCs can also share a single back plane Ethernet controller or a serial communications controller.
A disk-less-DOS-boot capability lets you boot up diskless PC, across the backplane.
PCC software should support the sharing of Multibus II disk and LAN controllers and bus peripherals use NetBIOS support to redirect harddisk accesses to the computer in the

software.
• PCC is a way for you to downsize complex applications that were once to huge for your server to handle.
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