

So what lesson can be drawn for us and for those who work in the field of facility management, either as facility managers or teachers? The educational situation in Slovakia within the field of facility management is certainly in need of a comprehensive learning programme. One well-known “guru” engaged in the field of facility management in the Czech Republic expressed the following wise words: “Since there are many educated people, but a huge lack of educated facility managers, a lot of work will have to be done in the field of education”. I, too, am of this opinion.

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ADMINISTRATION OF BUILDINGS AND PRINCIPLES OF INFORMATION AND ORIENTATION MARKING

Orientation, information, safety and other types of signs, as a form of visual communication are evolving along with humanity since time immemorial and other forms of communication. From the primitive need to leave information about food, danger, direction of movement, etc. This area of communication has developed to the present time into a wide variety of forms and modes of transmission of graphical information. Today this area is called SIGN represents a very large field of study involving in itself both elements of informatics, as well as those of design. Information boards and other marking elements became an instrument of expression of the level of positive relationship to users and visitors of buildings, production plants and institutions.

Orientation, information and safety signs must comply with the requirements of all potential users, including the requirements of people with a health handicap. Especially for people with limited mobility and orientation the information system derives from the following forms:

- forms of visual communication – people with physical, hearing and mental handicap;
- forms of acoustic communication – people with visual disabilities;
- forms using tactile elements – people with visual handicap.

In terms of indicative marking the essence is to communicate using signs and symbols. The characters represent different sounds of verbal communication (letters) and in summary form texts. Another form of the characters are numbers used to express count or quantity of a certain variable. The information communicated using characters shows obvious influence of the language used. Some

groups of characters gained importance over time, almost regardless of the local environment (INFO TAXI, SOS, MAX, MIN, etc.).

Symbols are graphic elements that carry information on the basis of the following:

- similarity to the real thing or action;
- previously made agreements or practices (usage) and a graphic symbol than expresses the information that is derived from the symbol shown.

Signs and symbols are usually framed in a specific space, either by an underlining or graphical element (frame), which creates an information element (board, table), fig. 1–2.

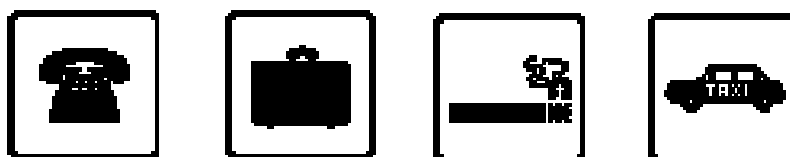


Fig. 1. Examples of graphical elements expressed by the similarity to a real thing or action

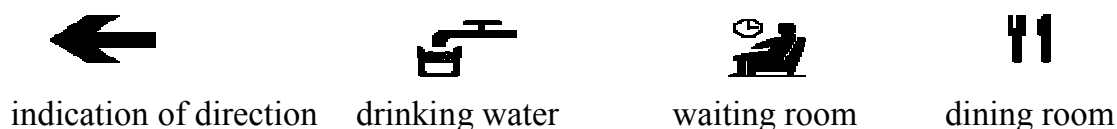


Fig. 2. Examples of graphic elements expressed on the basis of usage or predetermined agreement

Very important elements in the transmission of visual information are colours. Use of colours in the transmission of visual information is a typical example of an agreement based on the natural action of the given impulse on humans. For example green colour is perceived by people as peace, safety, comfort, and therefore it is used in the standardized colour system (ISO) as information on safety, fig. 3.

<i>Colour</i>		<i>Information meaning</i>
Green		Notification of safety
Blue		Command
Yellow		Warning
Red		Ban
Grey		Information cancelling

Fig. 3. Examples of the use of colours for graphic information system

Another important factor in communicating information is the shape of table or the form of its frame (fig. 4). These practices are mainly used in the area of traffic signs, but some symbols are used and perceived in general. They include especially the following:

- prohibitions (crossed symbols in a circle);
- warnings (triangles);
- indications of direction by arrow-forming pentagons.



Fig. 4. Examples of shapes used in tables

The arrow is the most commonly used symbol in the guidance systems, especially the Belgian arrow (standardized ISO arrow), which is used either in standard design or only the top part (fig. 5).



Fig. 5. Belgian arrow in standard version and the top part design

Other modified forms of the arrow are used to reflect changes in direction, or other information related to movement (fig. 6).



Fig. 6. Modified forms of so-called Belgian arrow

The precondition of functional and user-friendly guidance systems is the observance of the following basic principles.

1. Principle of minimum necessary information.

The users should not be included in a greater amount of information than is necessary for orientation in a situation where they are. Initial information should include basic (gross) division of goals and the information is gradually divided (according to the tree structure logic) in more and more detailed.

2. Principle of readability and clarity.

Observance of this principle is significantly influenced by several factors:

- used type (font) for characters (including the font proportions);
- simplicity of graphic symbols (fig. 7);
- degree of contrast between characters and symbols and the substrate (fig. 8);
- size of characters and symbols (reading distances), table;
- people in wheelchairs and of small stature find information boards fitting height to be a considerable problem;
- lowered viewing horizon results in a different field of vision, or other vertical viewing angle;
- from the distance of 1 m the viewing field of individual groups of people ranges from 900 to 1400 mm. If the information board is placed outside this range (especially over 1900 mm) the recommended incline of the board is 30° from the vertical plane;
- apart from the height setting it is important to pay attention to font size, which is based on the height from the ground and horizontal distance;
- distance between the symbols, characters (the distance between letters, words and lines);
- use of colours as an auxiliary element of rationality (division of objects in colour zones);
- respecting and possible optimization of lighting conditions of the place where information is provided.

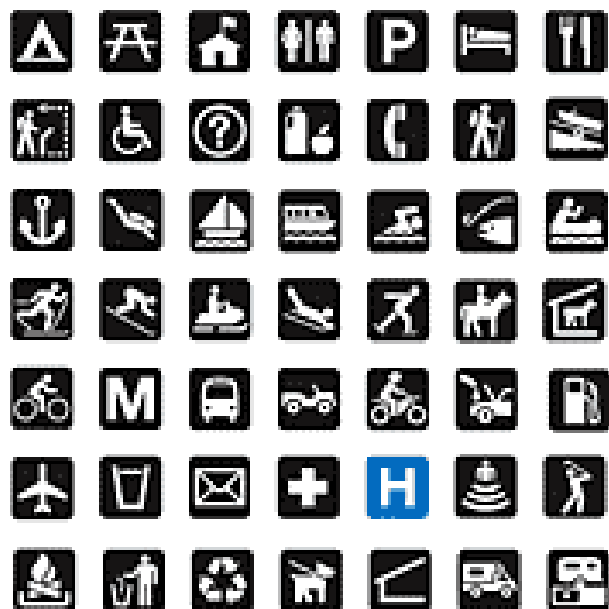


Fig. 7. Example of a simple graphic of symbols – pictograms

Background basis	Colour of description, characters							
	Black	White	Violet	Blue	Turquoise	Green	Yellow	Red
Black		(+)	(+)	(-)	(+)	(+)	(+)	(-)
White	(+)	FFFFFF	(+)	(+)	(-)	(-)	(-)	(+)
Violet	(+)	(+)	FF00FF	(-)	(-)	(-)	(-)	(-)
Blue		(+)	(-)	0000FF	(+)	(-)	(+)	(-)
Turquoise	(+)	(-)	(-)	(+)	00FFFF	(-)	(-)	(-)
Green	(+)	(-)	(-)	(+)	(-)	00FF00	(-)	(-)
Yellow	(+)	(-)	(+)	(+)	(-)	(-)	FFFF00	(-)
Red	(-)	(+)	(-)	(-)	(-)	(-)	(+)	FF0000

Fig. 8. Suitability of surface colours and fonts for graphic information system

Recommended safety table formats

Sign meaning	Recognizability, m							
	A6	A5	A4	10×10	15×15	20×20	20×10	30×15
Prohibitory, warning, command	4	5,5	8	4	5,5	8	-	-
Informative, fire, escape	10	14	20	10	14	20	10	14
Additional label texts	max 25							

3. Principle of continuity of information.

Communicated information must be continuous (fig. 9). Especially in terms of uniform nomenclature (names of parts of buildings, communities, sectors, institutions, expertise) and a uniform method of locating the object levels (division in floors or floor levels, method of identification of mezzanines, ground floors).

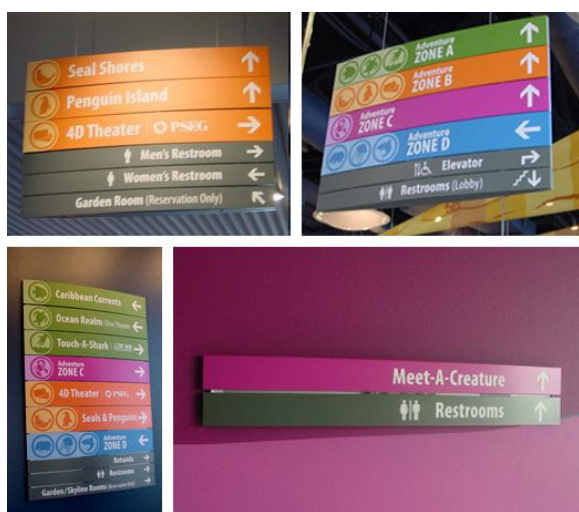


Fig. 9. Example of use of colours as an auxiliary element of rationality (division of objects in colour zones)

Different people have different orientation skills; therefore already the design of the building must take into account those least able to navigate in a foreign environment. Readability of spaces lies in the conceptualisation and logic of the layout of every single building. The aspect of easy orientation in the building is often neglected, but unconsciously generates a summary of feelings, either negative or positive in the visitor. To a certain extent (especially in complex operations) understanding of the place is facilitated by the guidance system. It is necessary to realize that **the main focus, however, remains on the clear and transparent concept of the building being designed.**

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FACILITY MANAGEMENT IN RELATION TO PROVISION OF CONDITIONS FOR USE OF BUILDINGS BY PEOPLE WITH VISUAL HANDICAP

Within the management of objects and maintenance of buildings, as partial performance of Facility Management, we must, among other things, ensure a safely functioning property that is managed. When talking about safely working facility, we also mean safety in everyday use by the tenants. One of the specific groups of potential users are people with visual limitations that may have a variety of disorders of visual perception:

- visual acuity;
- disturbances of color perception;
- failure to adapt to darkness and glare;
- contrast sensitivity disorders;
- difficulties in processing visual perceptions;
- disorder of spatial vision, double vision, etc.

Each of these disorders provides us with ideas on creating the optimal environment so as to minimize to the greatest extent possible the handicap of such persons. Basic general technical requirements in the CR are subject to legislative regulation – Decree no. 398/2009 Coll. on general technical requirements enabling the use of barrier-free buildings.

Supportive elements, which help the people with visual limitations to move independently in the building, are the following:

- ensuring tactile and acoustic access to objects;
- choosing a clear and well-arranged layout, preferably in a rectangular system;
- possibility to use the latest technology (intelligent stick) for the object;
- emphasize the dangerous areas with contrast markings;