INTERNATIONAL STANDARD

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Construction drawings — Designation systems —

Part 3:
Room identifiers

Dessins de bâtiment — Systèmes de désignation —
Partie 3: Identificateurs de pièces

ISO 4157-3:1998(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4751-3 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation,* Subcommittee SC 8, *Construction documentation*.

ISO 4157 consists of the following parts, under the general title *Construction drawings — Designation systems*:

— *Part 1: Buildings and parts of buildings*

— *Part 2: Room names and numbers*

— *Part 3: Room identifiers*

1 Scope

This part of ISO 4157 establishes requirements for designation systems for rooms, areas, spaces, and voids in buildings by room identifiers. It introduces a new designation concept intended for identification of rooms in a project throughout its life cycle, i.e. the conception, programming, planning, erection, maintenance, remodelling and demolition phases.

2 Normative references

The following standards contain provisions, which through reference in this text, constitute provisions of this part of ISO 4157. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 4157 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4157-1:1998, *Construction drawings — Designation systems — Part 1: Buildings and parts of buildings.*

ISO 4157-2:1998, *Construction drawings — Designation systems — Part 2: Room names and numbers.*

3 Definitions

For the purposes of this part of ISO 4157, the definitions given in ISO 4157-1 apply.

4 Room identifiers principle

4.1 General rules

When appropriate for the planning, maintenance or management purposes of a building, room identifiers shall be assigned to each and every room, i.e. room, area, space, void, etc., of a building.

Room identifiers shall be allocated in consecutive order for each storey and may not be revised during the lifecycle of a building. They serve as unique identification of a room which is planned, built or extinct, and is conceived for the interface between the building and a computerized information system. They uniquely identify rooms, areas, spaces and voids with a fixed geometry, time span of existence and other inherent properties and information.

4.2 Geometry

For the purposes of room identifiers, rooms shall be geometrically defined by their physical boundaries, or with imaginary planes which shall correspond with building parts such as storey level, protruding beams or partitions. For the purpose of room numbers (see ISO 4157-2) such bounds may have been left undefined.

4.3 Correspondence

4.3.1 All room numbers shall have a corresponding room identifier at any time.

4.3.2 All room identifiers need not correspond to room numbers.

4.3.3 Room identifiers need not have corresponding room names.

4.4 Integers

Room identifiers shall be of positive integers.

4.5 Composition of room identifier

A room identifier shall consist of a storey number (see ISO 4157-1) normally combined with a three-digit number, both preceded by a prefix I# (abbreviation for ISO Room Identifier). For each storey an unbroken succession of room identifiers shall start with I#n001 and be in ascending order.

NOTE   The storey number, which is counted from the bottom of the building, is normally not equal to the floor number, which is counted from ground floor (see ISO 4157-1).

4.6 Extra digit

Room identifiers shall have one more digit than room numbers to distinguish them from each other. When room numbering is chosen to be by the two- or four-digit system (see ISO 4157-2), room identifiers shall have one more digit. This also allows for a greater number of room identifiers than room numbers to identify voids, and for the numbers lost over the course of time due to rooms being remodelled.

4.7 Documentation

The current owner of such building should maintain a complete list of all room identifiers assigned with cross-reference to

a)   the geometry of the rooms (x, y and z coordinates);

b)   dates of occurrence (erection and demolishing dates);

c)   room names, if any;

d)   room numbers, if any.

4.8 Room coordinates

Room identifiers should be complemented by a set of coordinates to determine the rooms' position in three-dimensional space, i.e.:

a)   origin of room: $X_0Y_0Z_0$;

b)   minimum extension: $X_{min}Y_{min}Z_{min}$;

c)   maximum extension: $X_{max}Y_{max}Z_{max}$.

The origin of the room coordinates should be coordinated with the grid system of the building at the level of its lowest point and clearly indicated on the appropriate drawings (see figure 1).
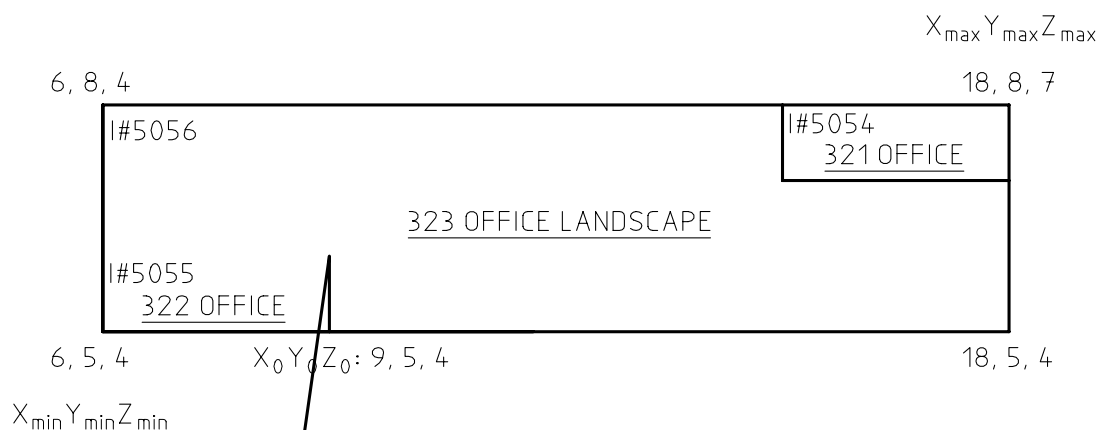
$$X_{max}Y_{max}Z_{max}$$

Figure 1 — Example of a floor plan (simplified) with room identifiers

Room identifier I#5056 in figure 1 is assigned to room number 323 OFFICE LANDSCAPE for the life span of the building. (The room is physically in the fifth storey and logically on the third floor.) The room coordinates are as follows:

a) corner $X_0Y_0Z_0$ has coordinates 9,5,4;

b) corner $X_{min}Y_{min}Z_{min}$ has coordinates 6,5,4;

c) corner $X_{max}Y_{max}Z_{max}$ has coordinates 18,8,7.

NOTE   Simplified coordinates are chosen for example only.

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