

## FORMFINDER PROFESSIONAL: ADVANCED TYPOLOGY CLASSIFICATION

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**Key words:** Formfinder Software, Architecture Classification Typology, Building Shape Context Database.

**Summary:** The architectural design and the successful implementation of form-active structures depend directly on the availability of relevant information and experience. Formfinder Professional offers a new set of "building shape and building context classification" to access knowledge of existing databases in the field of form-active structures.

### 1 WORKING CONCEPT

Historically, form-active structures<sup>1</sup> are distributed all over the planet. Therefore it is essential to travel and visit buildings and to contact involved project partners to learn from already implemented building structures. If travelling is not possible or project partners are not available the latest information technologies like the internet allow an improvement on information sharing. Developments like the SDA<sup>2</sup> or TensiNet<sup>3</sup> increased the availability of information on form-active structures. The SDA "*shape and structural annotation in a mnemonic code*"<sup>4</sup> and the "*classification of tensile membrane constructions*"<sup>5</sup> by TensiNet are positive steps in the direction to support designer with database information.

Currently database attribution and classifications are still very limited and therefore the database of Formfinder Professional was equipped with an "*advanced typology classification*" to support architects in the design and decision making process for form-active structures. It is to be mentioned that an "*incomputable number of influencing and emotional factors*" affect the decision process during an architectural design. But due to the physical constraints of form-active structures a common shape language and therefore a feasible typology description is possible. Architects profit very much of comprehensive and manageable information for an improvement on the architectural quality of form-active structures.

This work should commence the discussion on creating synergies by providing feasible information for architects. To prevent trivialisation working in a team with experts in the research field<sup>6</sup> and Formfinder Professional will hopefully increase the quality of architecture.

## 2 FORMFINDER PROFESSIONAL TYPOLOGIES AND CLASSIFICATION

Formfinder Professional is an easy to operate architectural formfinding software to visualise architectural characteristics and to describe the process of finding Gestalt<sup>7</sup>. Being aware of simplification form-active structures can exemplarily be classified as follows.

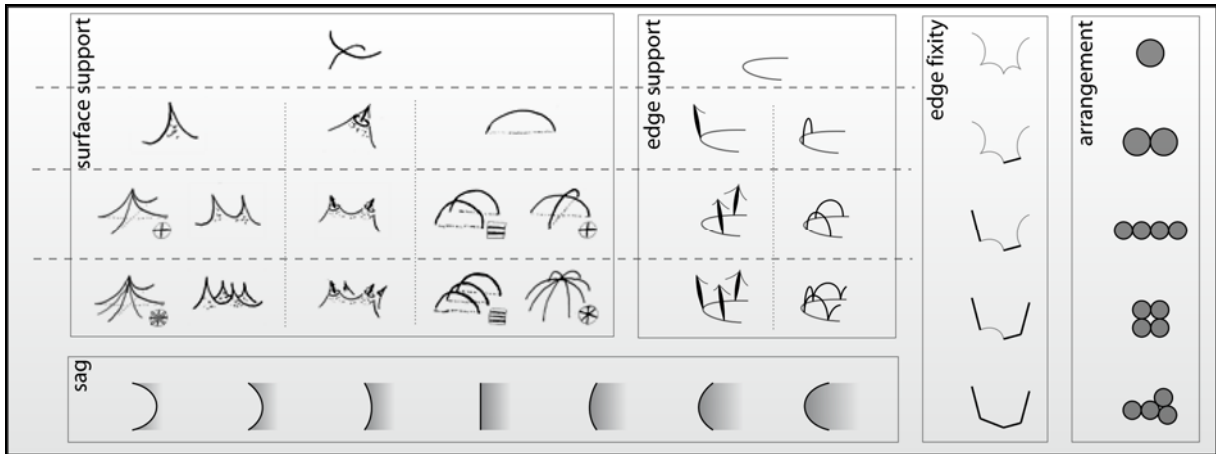


Figure 1: Formfinder Professional basic typologies

Each box exemplarily displays basic typologies and represents an observation of elements and structural parts. The simplified occurrence of "none, one, two or many" is sufficient for an allocation in databases. Sufficient describes that it is not necessary to count a specific number of e.g. highpoints or arches. The goal is to communicate the structural concept for the classification. The "geometric arrangement"<sup>8</sup> of the form-active structure is also of importance and is hereby identified by "single, pair, linear, planar or clustered". The intense work on the classification guided the Formfinder development team to the following first time introduced "location context" classification:

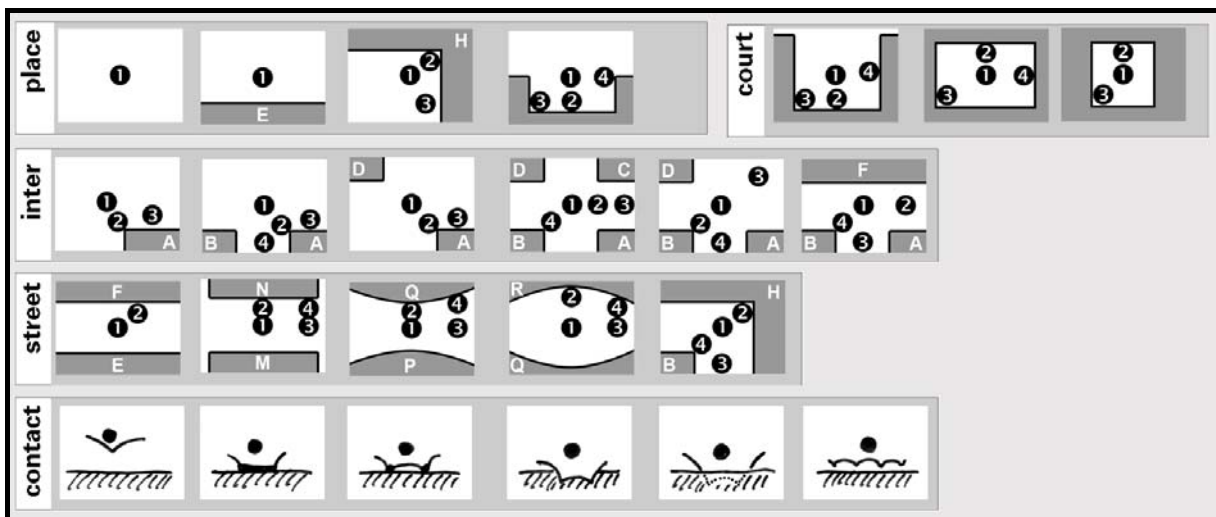


Figure 2: Formfinder Professional "location context classification"

At figure 2 each number in the black circle represents one form-active structure. The dark grey areas represent the built environment like buildings or geologic realities. Many design decisions can be recorded on the classification in the context of an urban environment. Multiple nominations should be added with a percentage value. The Figure also shows "place and court" intersect seamless. Contact with the built environment is also to be considerate.

The "location context classification" was first manually worked out on hundred projects from the SDA database by Mr. Roman Ivancsits of the Formfinder development group and was then tested with the Formfinder Professional software.

### 3 CONCLUSION

One central aspect of Formfinder Professional is the possibility to compare the desired design with projects already implemented. As a result, Formfinder Professional is a kind of "Google for form-active structures". Knowing what has already been built, when, by whom, where and how is of considerable value and forms the basis for every successful implementation project Formfinder Professional is intended to encourage to develop new designs and should be a source of enjoyment. It is also part of the architectural design to communicate with project partners at a very early stage.

Working together as a multidisciplinary team is essential for successful designing.



Figure 1: Formfinder Professional

#### 4 DEVELOPMENT SUPPORTED BY

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