

# ARTICULATION OF FACADE GRAPHICS IN ARCHITECTURE AND ITS DEVELOPMENT TECHNIQUES

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## Introduction

The article deals with issues at the boundary of architecture and technology, related to visual articulation. The facade graphics is a relatively new phenomenon that has arisen over the last two decades. Some of the image implementation techniques it uses have been known for a long time. Some of them are derived from stained glass (e.g. the technique of manual enamel application), some are related to the already known techniques of workshop graphics (screen printing). One of the latest technological achievements is the development of digital printing technology. Each of the aforementioned techniques has specific artistic possibilities and means of expression, which influences the articulation of the image in the external partition and has a significant impact on a number of compositional aspects. The image placed in the façade supports the building's form, underlining its shape, emphasizing important places in the building. The work examines the relationship between the applied techniques of implementation and the properties of the image on glass. An important part is to determine to what extent the construction of the image and the applied plastic measures affect the visual range of the glass partition and the functional properties. Particularly interesting projects are those made with several techniques, and those in which a new technique was discovered, which is later copied in other projects.

## Material and Methods

The publication will present examples of implementations placed in the facade of the building. The phenomenon will be investigated on the basis of buildings constructed over the last two decades. Due to the global nature of plastic phenomena, there is no limited research territory.

## Results

Based on the collected material, which was synthesised from materials of previous research, it can be said that the artistic values of a glazing play an important part in the image articulation in an architectural space. These values are: its form, dynamics, composition and colours, as well as the means by which the image affects its surroundings that result from selection of the right technique and strategy for formation of the partition.

The selection of techniques has a fundamental effect on the artistic values of the image, the shaping of its properties as well as how it is going to function within the neighbouring space. Each of the techniques has an individual way of how it is applied, a typical strategy for building transparency, and a special set of artistic means; therefore they all affect image articulation in a different way.

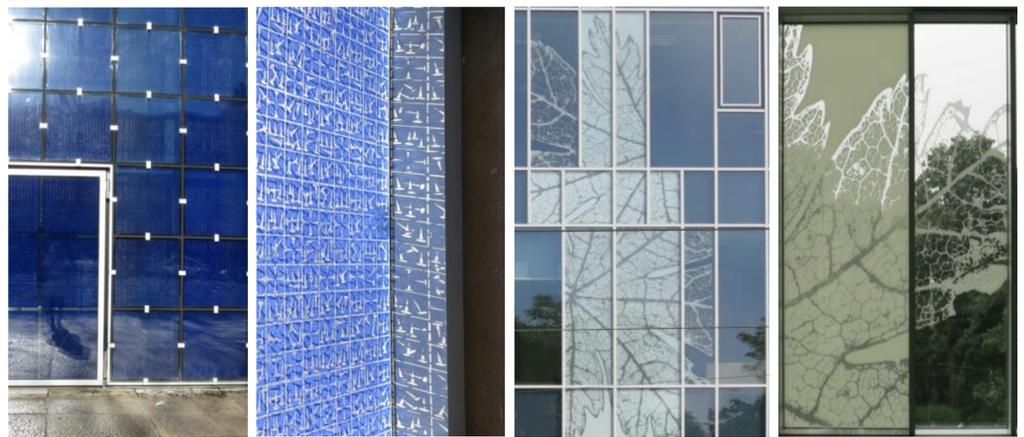


Figure 1. Facade made in the screen printing technique, a, b) Transparent image, illuminated from the front, Church of the Sacred Heart of Jesus, Munich, Germany (Alexander Beleschenko, Allmann Sattler Wappner Architekten, 2000) c, d) *Botanica* residential and service complex, Wrocław, Poland (arch. Dziewoński & Łukaszewicz, 2014), photos by the author.



Figure 2. a) Façade made using mixed technique; silk-screen printing, hand-coated glass, expansion of the Empire Theater, Liverpool, Great Britain (Martin Donlin, Ellis Williams Architects, 2002), b) close-up view, c) Lovefield Airport, Dallas, USA, (Martin Donlin, Corgan Architects, 2013), photos by Martin Donlin.

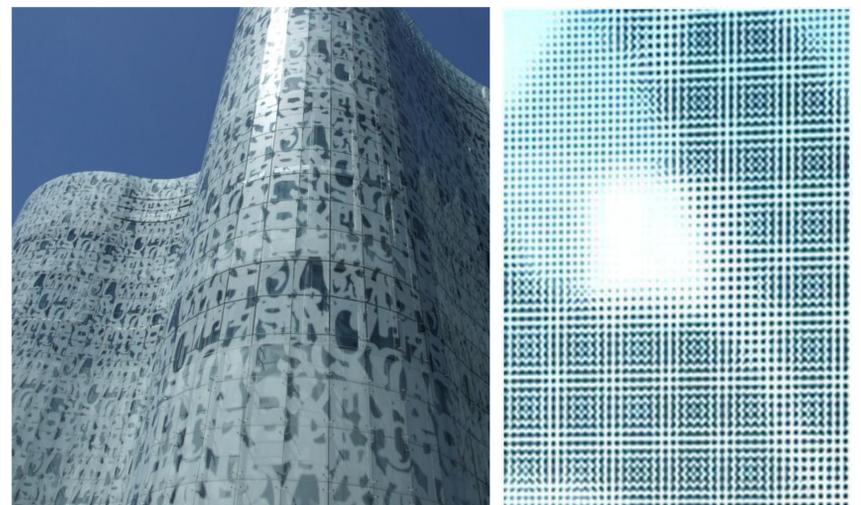


Figure 3. The University Library, Cottbus: a) - building's façade; b) - interference patterns from up close. Photos: by the author.

## Discussions & Conclusions

Each of the techniques is connected with a specific method of image implementation, meaning a specific way in which glass layers with a certain artistic form are composed. Some of the techniques are more often used to create narrative images (e.g. screen printing or digital printing), while others (e.g. laminated glass, manually coated glass) facilitate creation of abstract images.

Certain techniques for art glass creation enable the author to at the same time achieve utilitarian objectives, e.g. glass façade covered with pigmenting materials, enamels, or patinas provides protection against excessive penetration of sunlight and building overheating.

The external layer with an image composed of small elements participates actively in the provision of translucency, simultaneously shaping the nature of the visual integration between the interior and exterior of the building. Façade's transparency depends, for instance, on the size of elements, print density, and the number of its layers.

Having composed a façade of several separated layers of glass or using double-sided print, the creator can achieve a spatial layer effect. In such layers, visual interference phenomena can often be observed. The gap between the sheets of glass may be used as a buffer space for the building



Figure 4. Colorful facade made with slumping technique, Building of the Netherlands Institute for Sound and Vision, Hilversum, the Netherlands (Neutelings Riedijk Architects, 2006), photos by the author.

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