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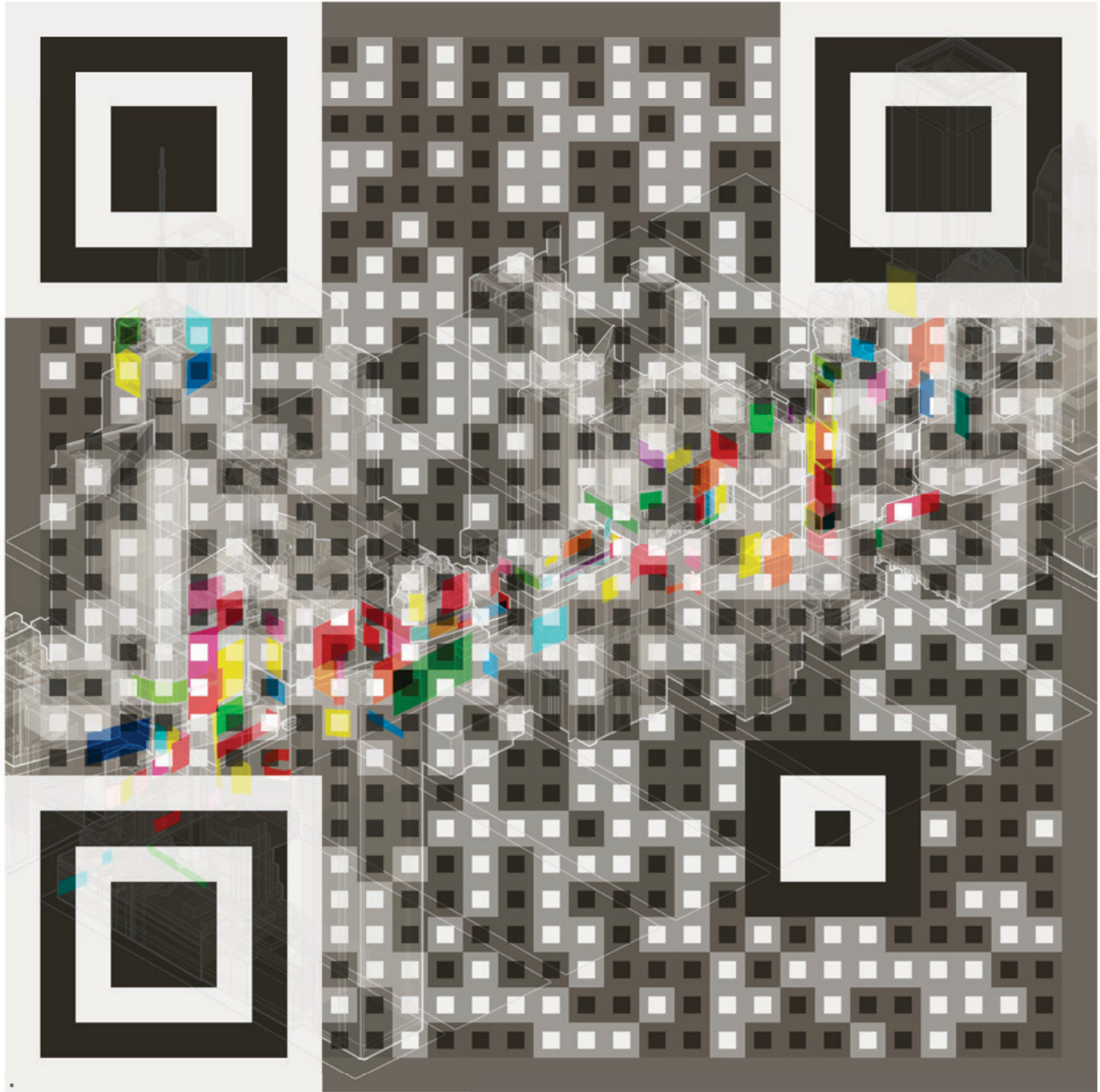
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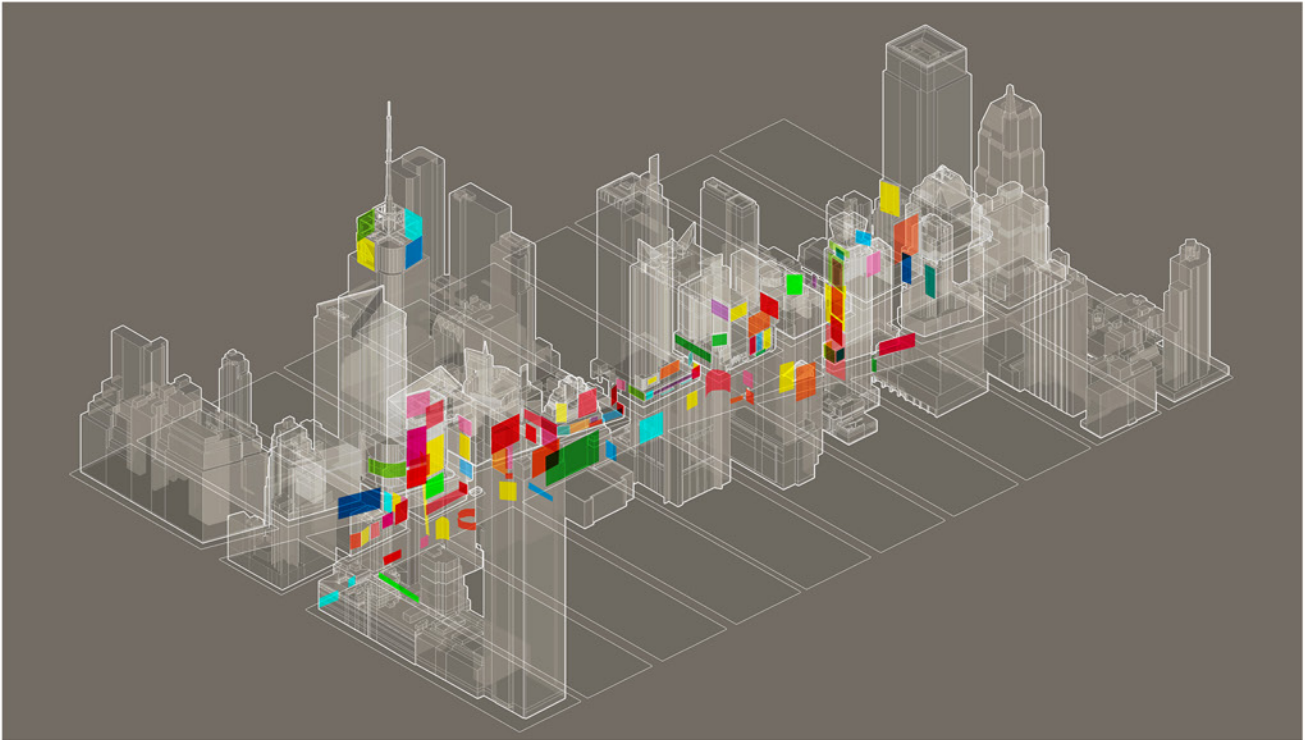
[AR] YOU READY?

2016-2017

by Trang Tran

For a generation, Learning From Las Vegas by Denise Scott Brown, Robert Venturi and Steven Izenour admonished the role of architects in controlling the construction of visual environment and accept the glitz of billboards and signage design on the strip. Their work examines a kind of architecture in which textual and visual communication situated in space- or signage- defines the identity of the building in particular and the city in general. Signage and billboards attached to existing structures parasitically and as a result boldly subvert their framework. If Times Square is an extreme example of this condition, One Times Square is the ultimate symbol of this place.





*Overwhelming Amount of Billboards
in Times Square*

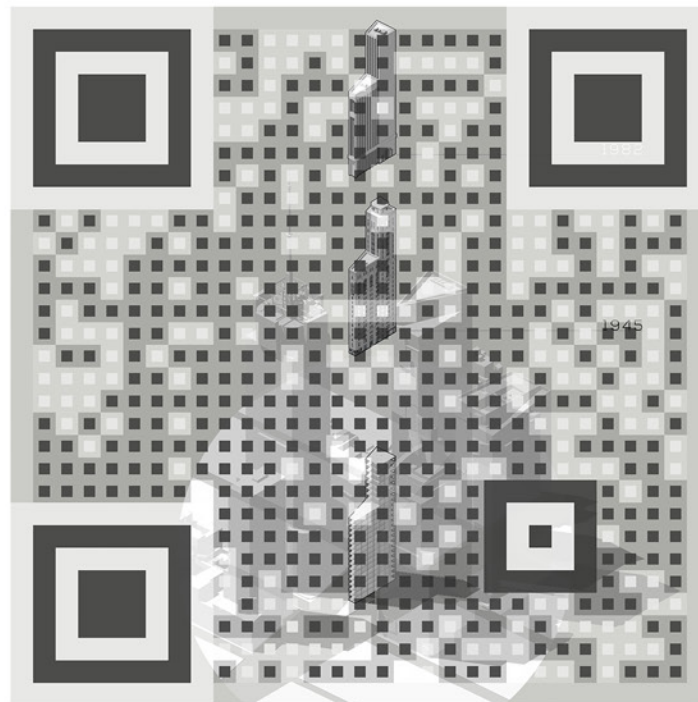
However, these parasitical billboards are becoming obsolete and irrelevant as advertisements are being curated for personal devices such as cell phones, PCs and whatnots. It is the post-human architecture that we are entering. In the digital age, our body will no longer be the dominant measure of space, and we will see our surroundings not through the naked eyes, but a layer of digital information embedded and visualized by technologies.

Augmented reality is a live direct or indirect view of a physical, real world environment whose elements are augmented by computer-generated sensory graphics input. Augmentation is in real time and in semantic context with environmental elements. Buildings and city will be perceived through camera lens, sensor, or scanner. They identify a scene or an object by searching for predefined relationships, patterns or geometries. In this context, we need to start imagining new design that is understandable by both human and machine.

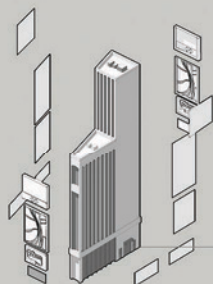
Conventional advertisements are becoming obsolete. Advertisers are looking at Augmented Reality (AR) as part of a marketing drive in order to attract customers. This requires an in-depth knowledge about their intended customers; who they are, what they need and why they need it. Understanding their habits and backgrounds in order to personalize ads accordingly to their lifestyles are the triggers for buying. AR advertisement establishes a deeper connection with consumers by curating different worlds for each AR users. Advertisers can personalize ads, so what each user sees is different depending on their profile. This could give rise to highly relevant, targeted campaigns which have huge engagement, because not only are they unique and memorable, but they would appeal to what the user actually wants to see. This could be where AR really influences the future of advertising.

The 25-story One Times Square's history can be traced back from its first construction in 1904. One Times Square was built to serve as the headquarter of The New York Times, which later moved to another location. The original façade was characterized with Italian-Renaissance elements, faced in limestone, terra-cotta and bricks. It was architecturally mutilated in 1964 after being sold to a corporation. The building underwent a facelift, what Huxtable called "a no-style skin of lavatory white marble with the look of cut cardboards." The steel structure remains; yet ever since then, it is the billboards that have ensured the building's enduring iconic status as the symbolic focus of Times Square. A center of unrestrained commercialism, it represents the symbolic environment of Times Square, physically. To quote Huxtable:

"It could probably be made of marzipan and it wouldn't matter. The odd little icon is universally known by the illuminated signs."



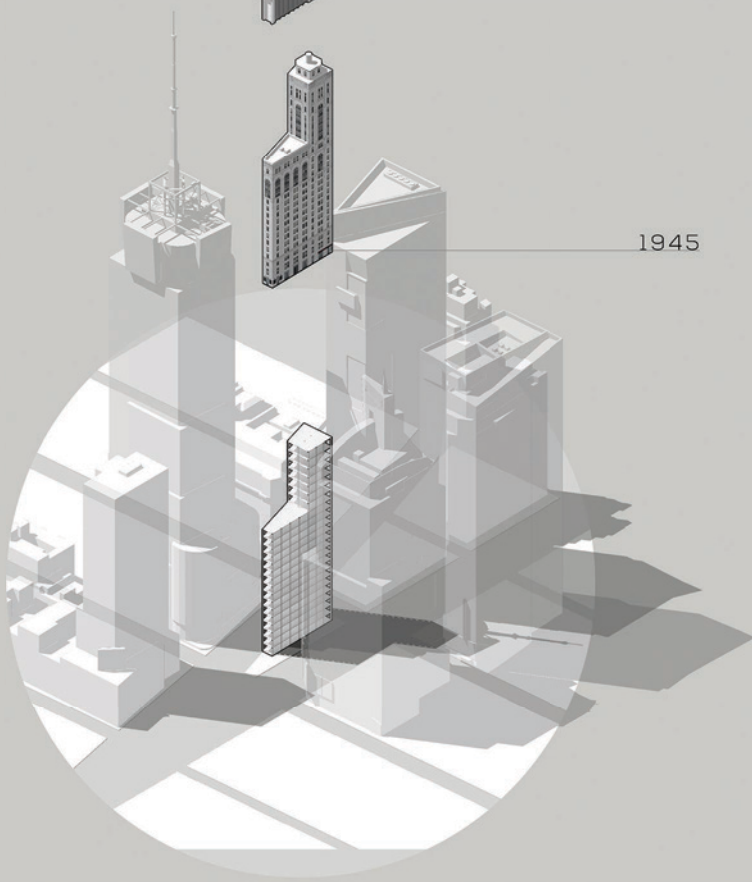
*One Times Square's transformation
through the years*



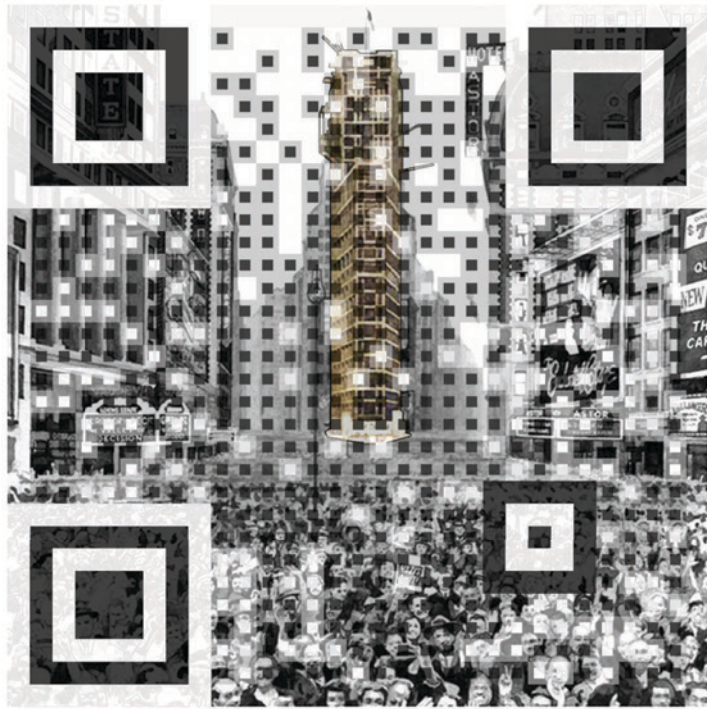
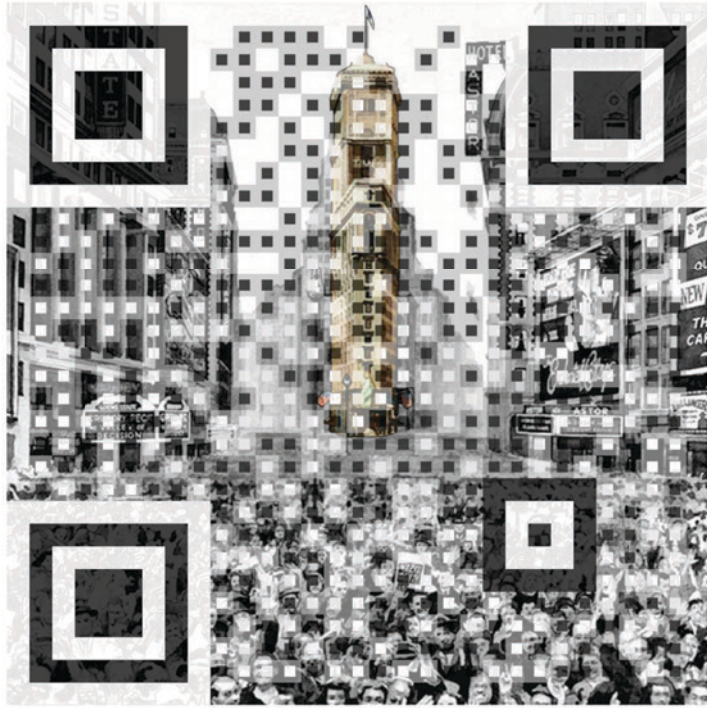
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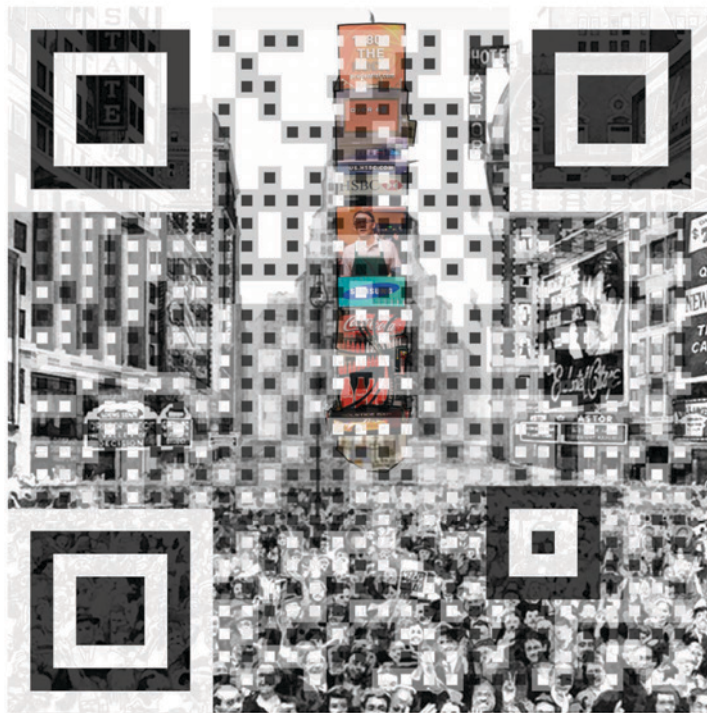
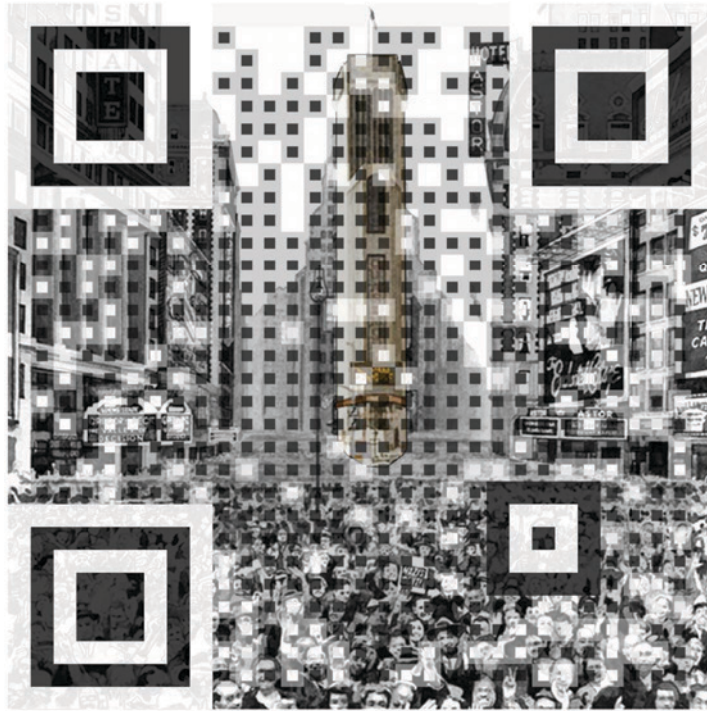
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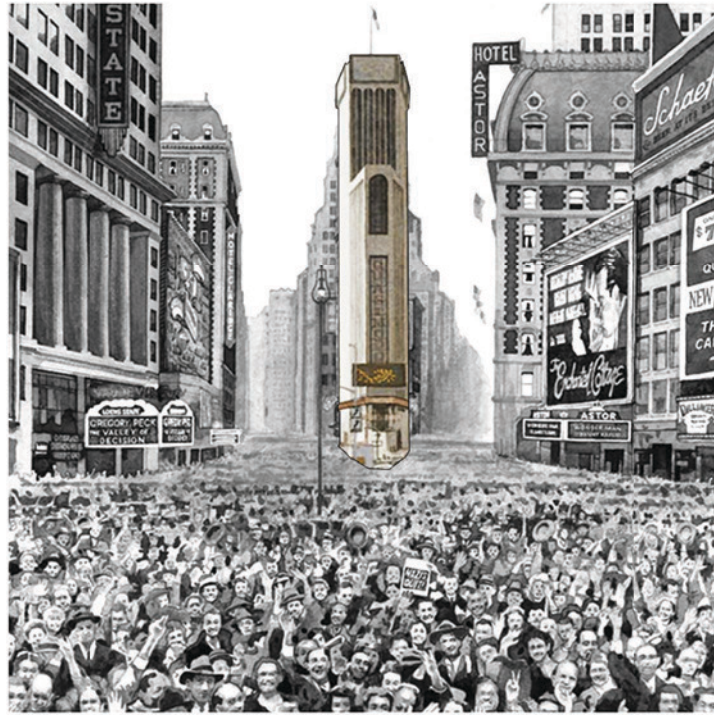


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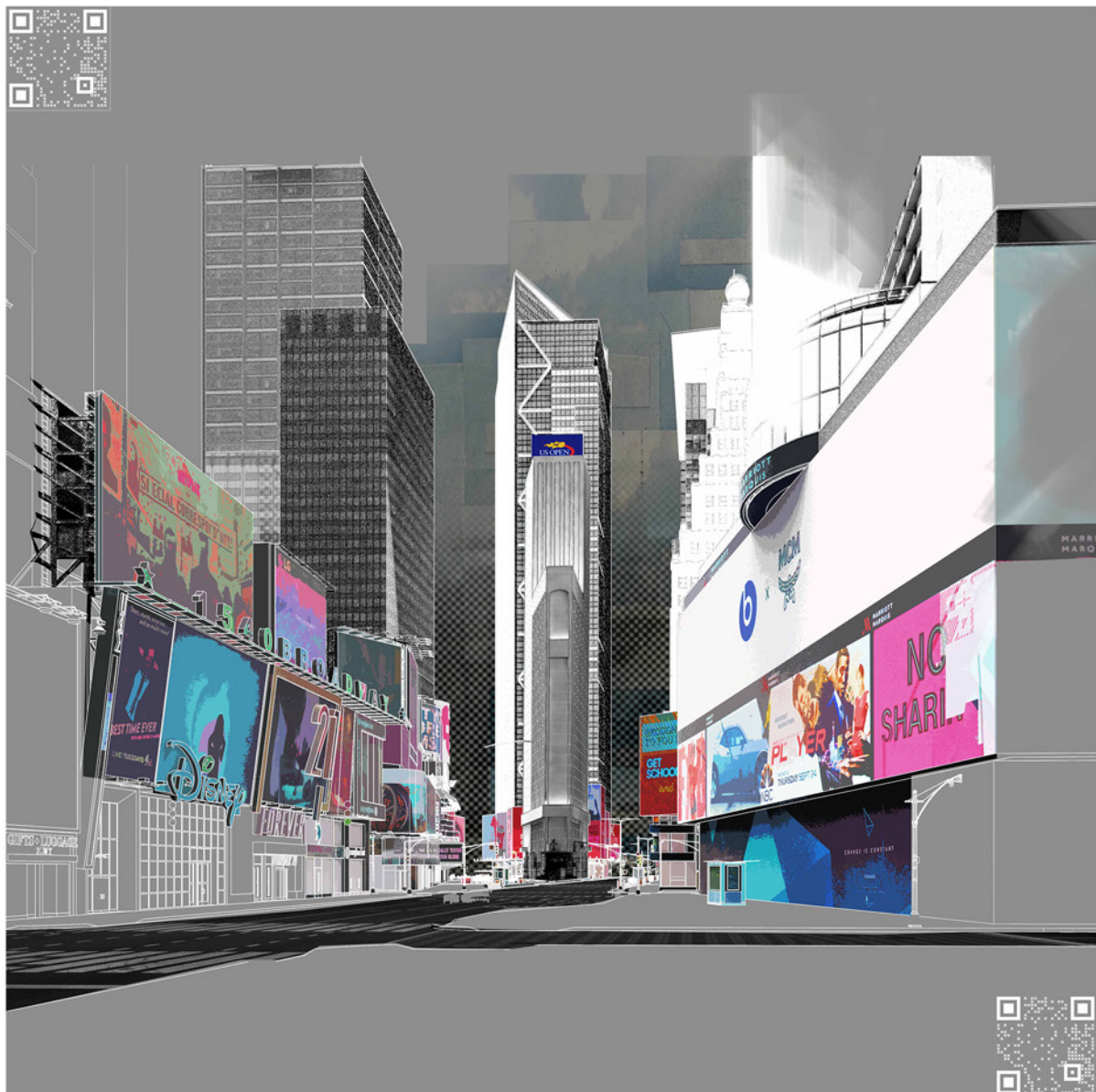








One Times Square generates more revenue as a collection of advertisements than it would full of tenants. The value of the building envelope exceeds the value of floor area, as it is a site hosting billboards in different sizes, making the space behind undesirable or even inhabitable. The average rate of billboard space in Times Square is almost three times more expensive than the average rate of office space in Manhattan. What would happen if the physical existence of these billboards can be taken out of this equation?

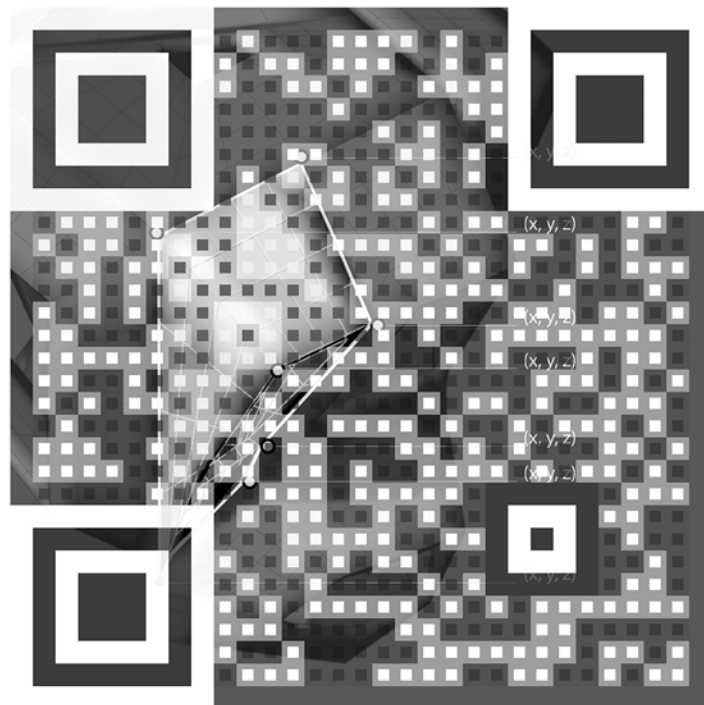
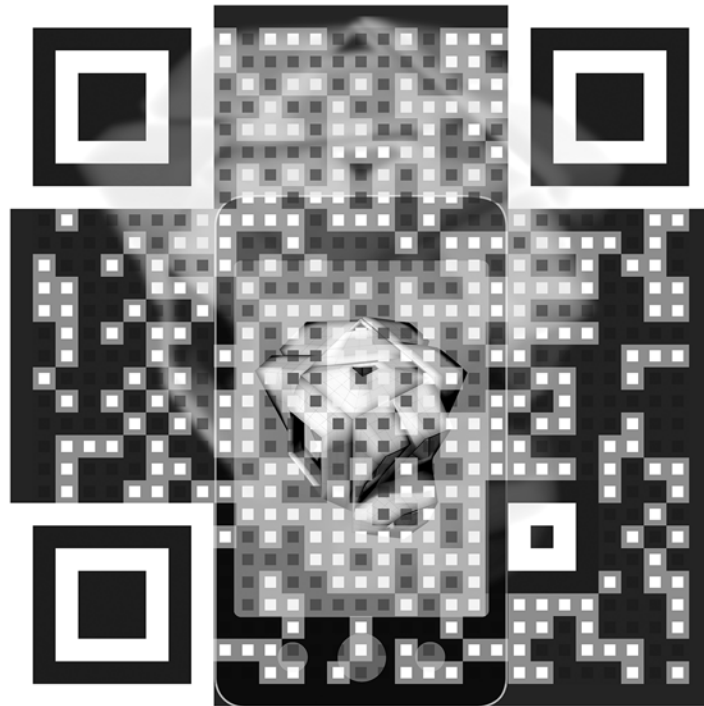


In term of architectural values, AR totally transforms the relationship between buildings and signage, as the signs and billboards' physical existence is translated in a digital realm, implemented through an architectural interface and allowing for a re-definition of the architectural space once left obscured behind them. The building facade becomes an architectural interface where augmented information is placed on. This outmost layer can communicate with devices without overshadowing the space behind, which will be once again occupiable. In this way One Times Square will be utilized once again by its surface and volume, and it will transform its relationship to the site opening up its interior spaces through a permeable, active façade.

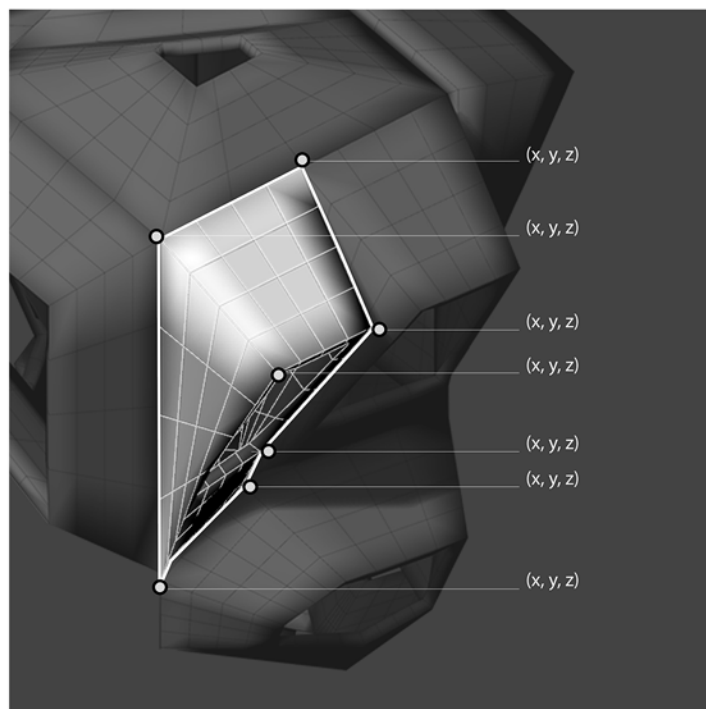
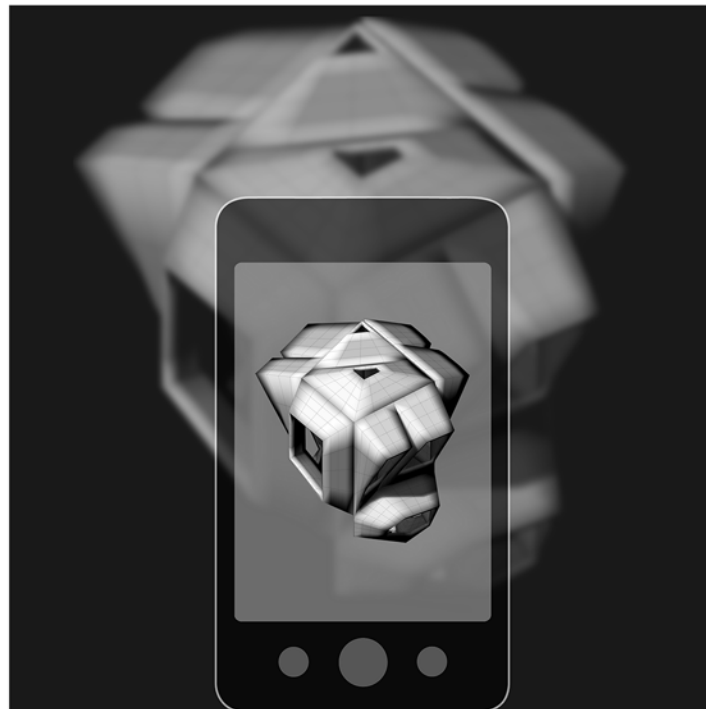


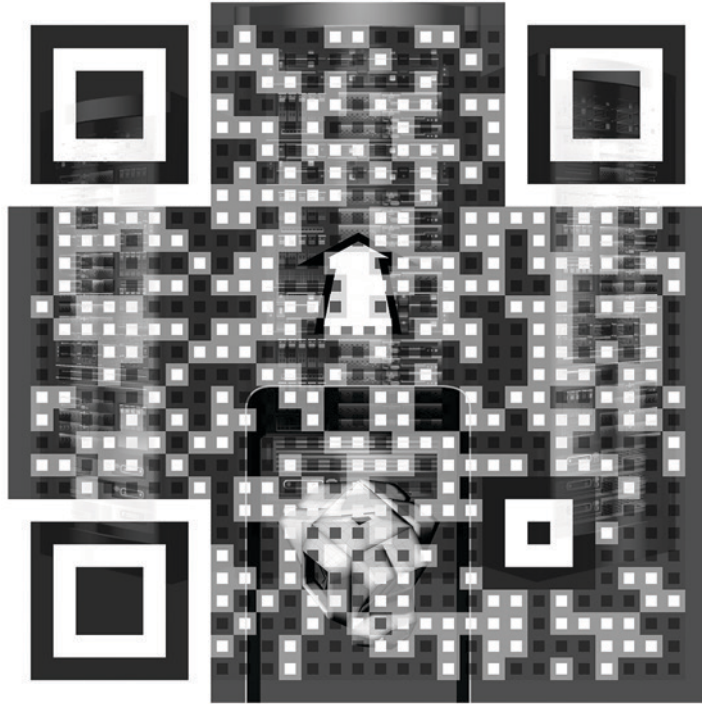
This project challenges the obsolete existence of signage and billboards and seeks to explore how augmented reality (AR) advertisements change the relationship between signage and buildings.

The device understands a geometry or pattern of an interface similarly to how it does a QR code. A QR code contains a unique pattern with strong contrast with the background. The more contrast the easier it is for the device to “read”.



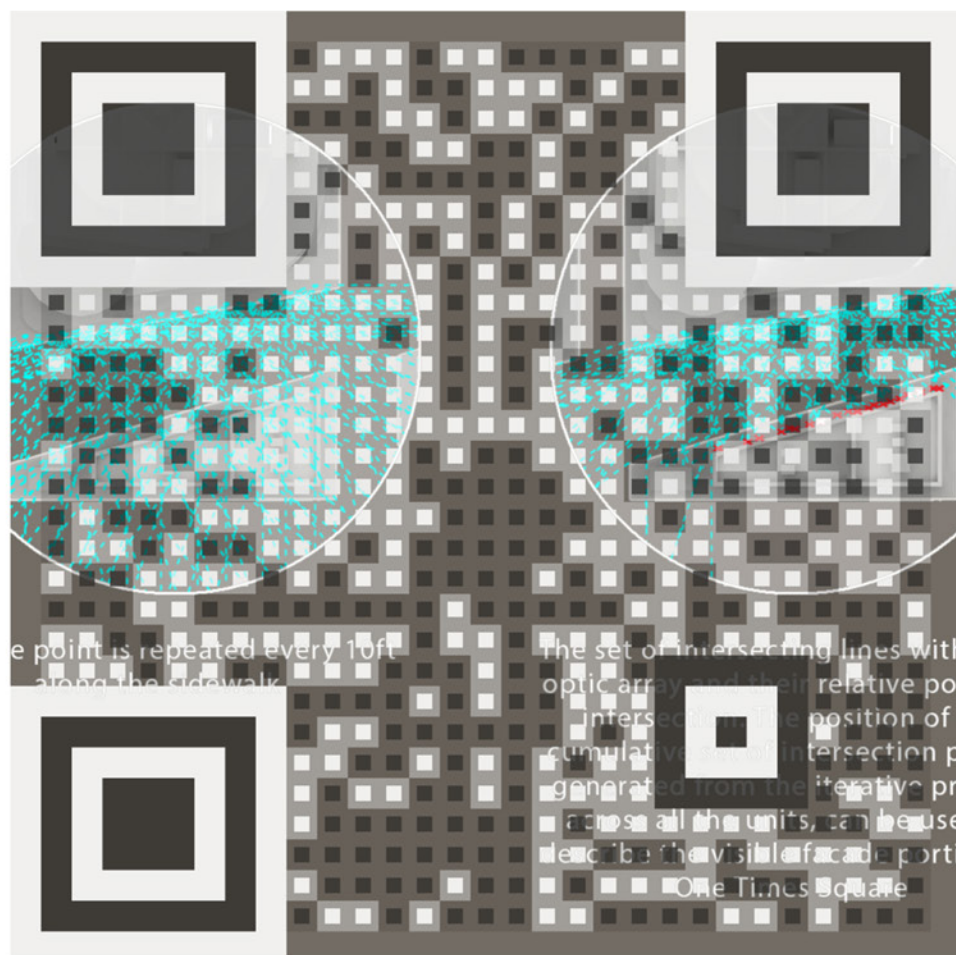
The same rules apply for AR technology. The skin becomes a 3D architectural interface that can be read by the device through contrast produced by shadows and sharp edges. The AR-compatible skin embodies elements that create different levels of contrast on the façade. Where the shadow is casted would generate a number of tracking points. The deeper the shadow is, the higher contrast is created, the more populated these tracking points are.

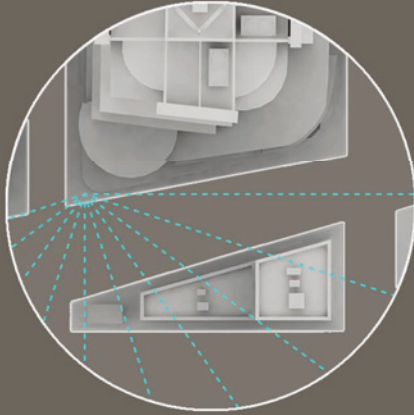




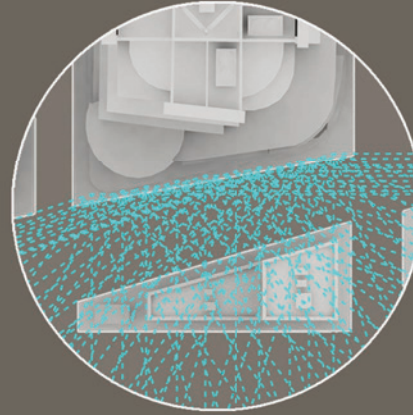


I first started to analyze the visibility of the building original façade by taking one vantage point from each surrounding block. View rays are projected from the vantage point and hit the façade, creating a heat map indicating levels of most visible to least visible areas from a pedestrian's eye level.

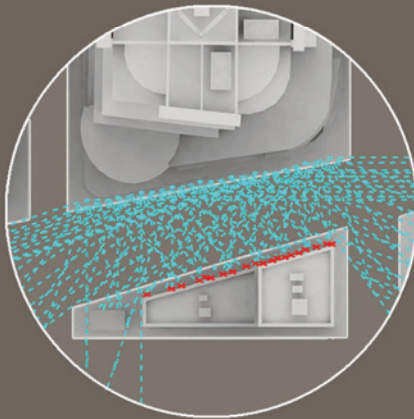




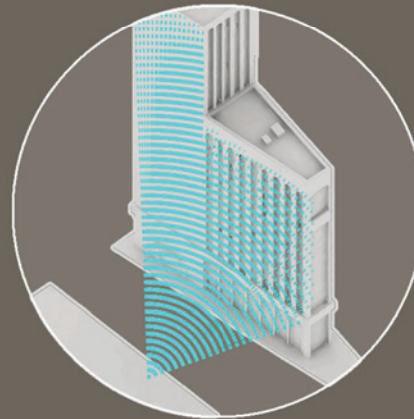
The geometric construction of the Visual Field utilized to measure visual density relative to One Time Square



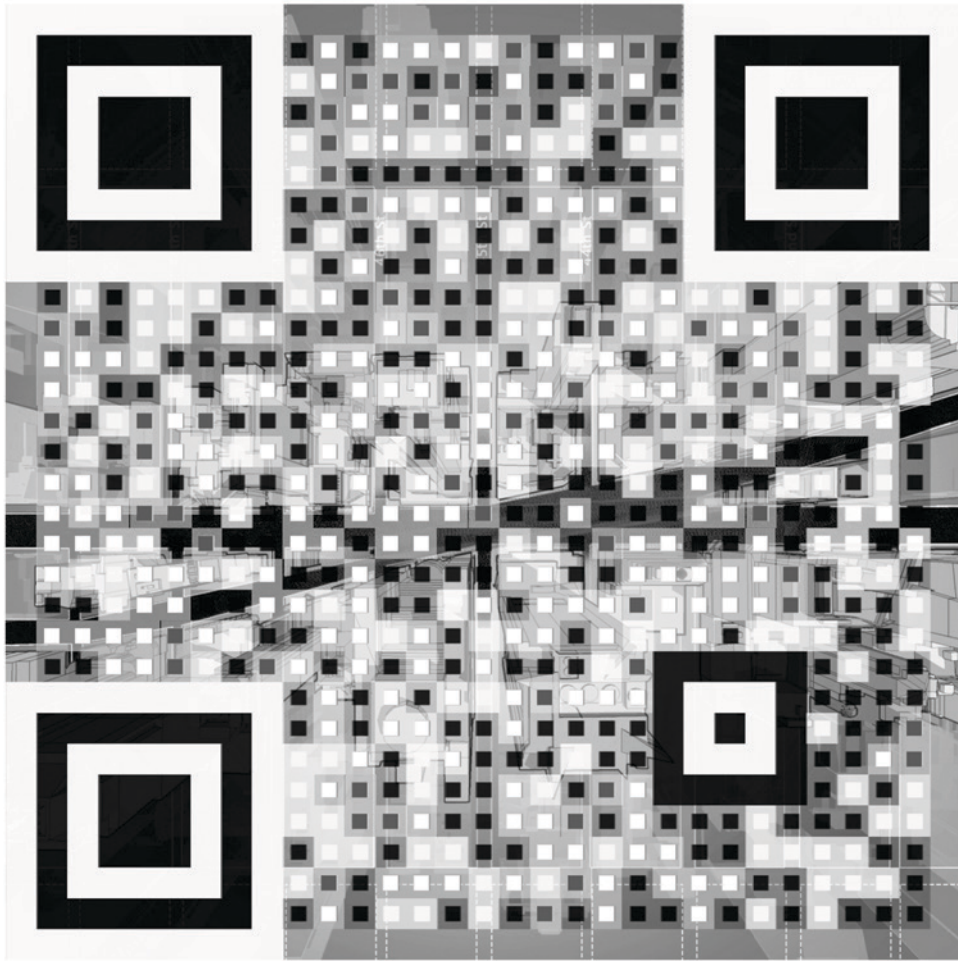
Vantage point is repeated every 10ft along the sidewalk

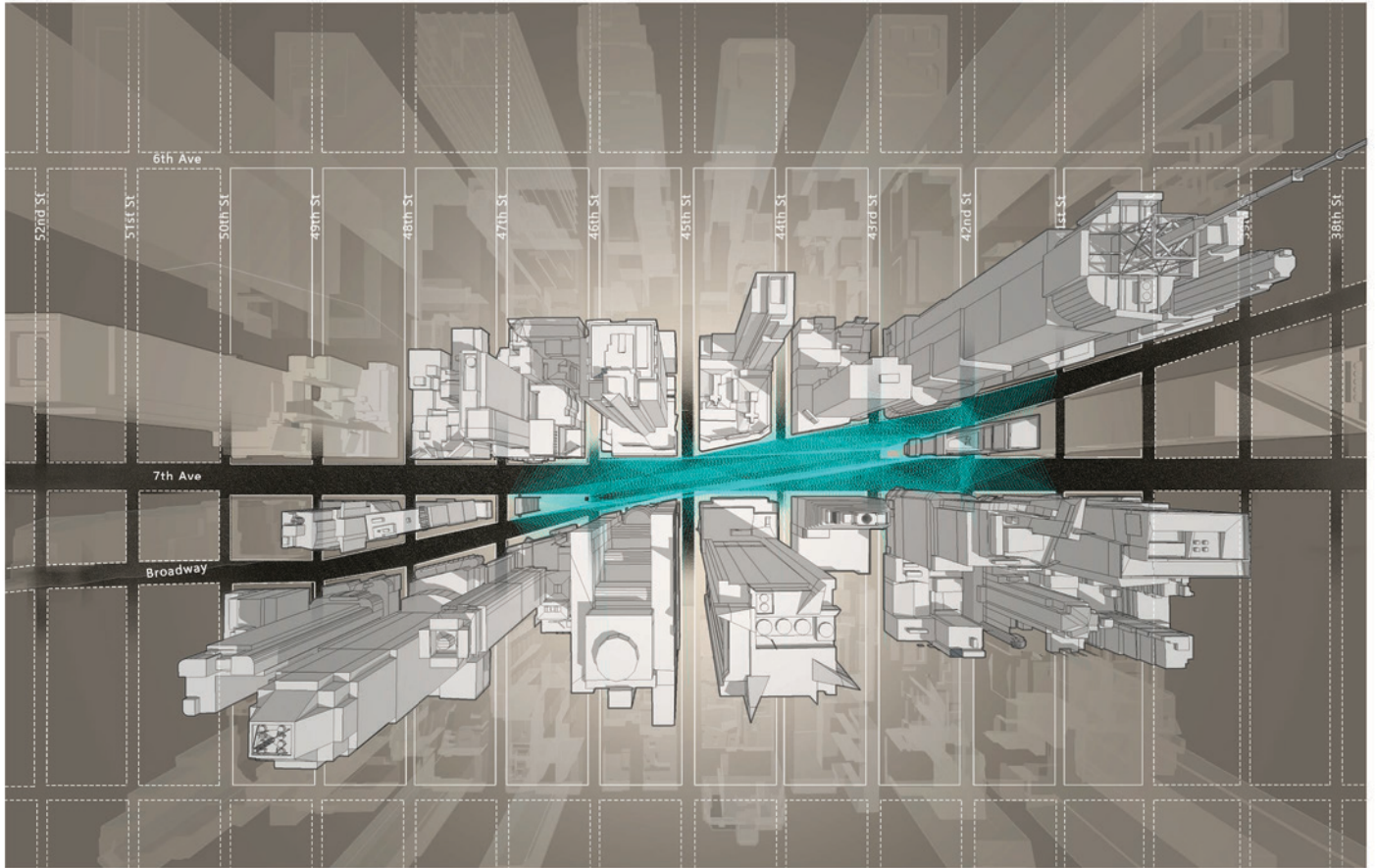


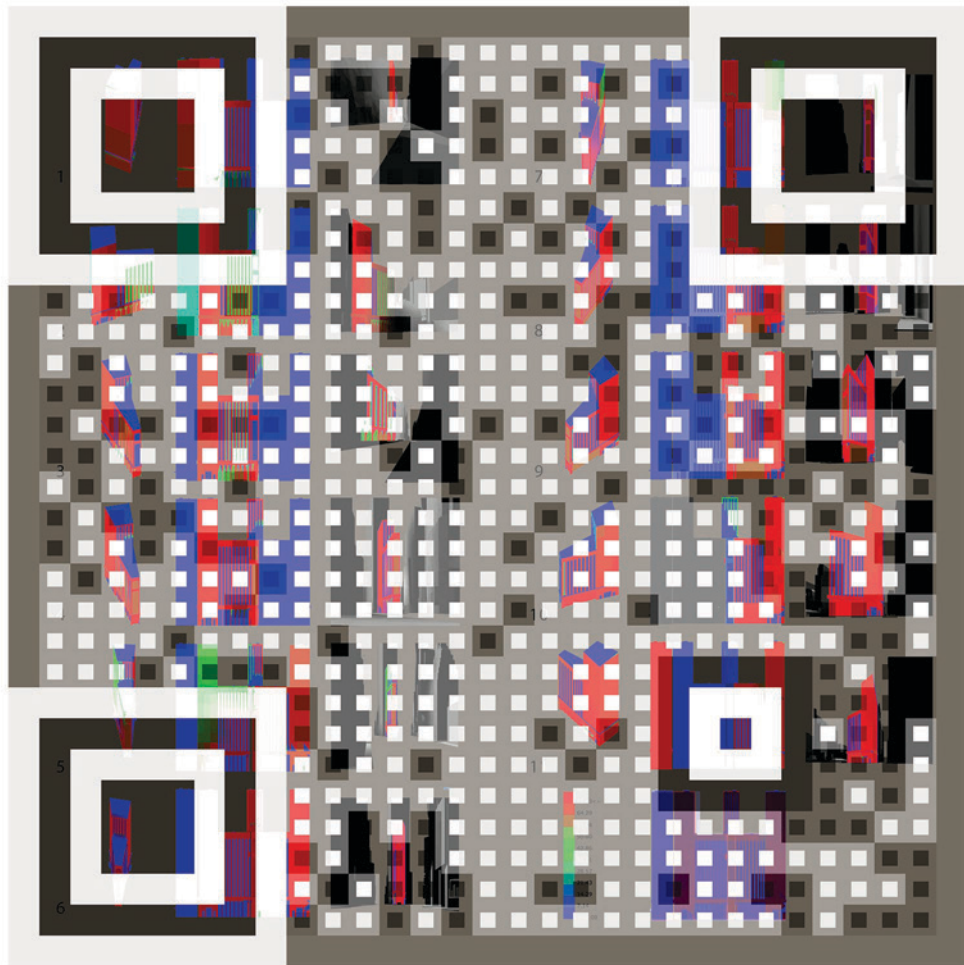
The set of intersecting lines within the optic array and their relative points of intersection. The position of the cumulative set of intersection points, generated from the iterative process across all the units, can be used to describe the visible facade portions of One Times Square



View rays derived from human cone of vision are projected on to the facade(s) to describe the visible portions of One Times Square in three-dimensions.







1



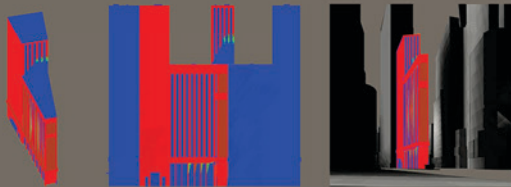
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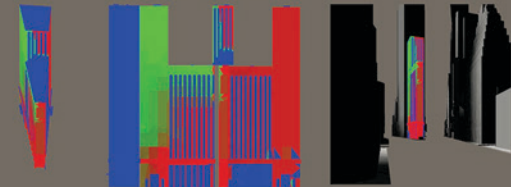
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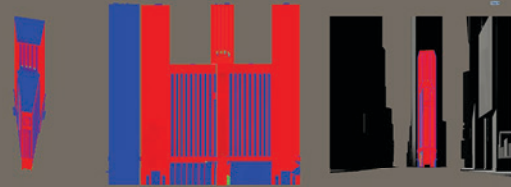
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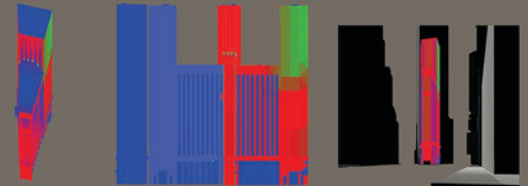
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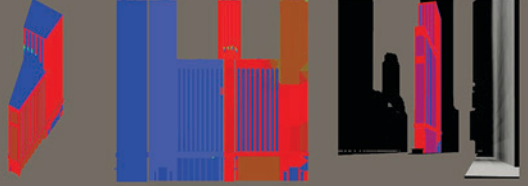
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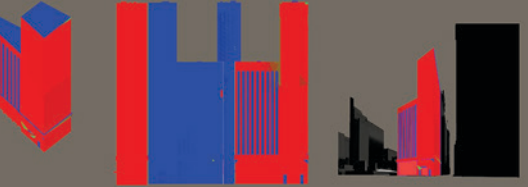
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10



11



The new skin design is derived from this heat map. It is subdivided into smaller cells, each with an opening in different sizes. The skin is thickened to create a contrast with the receded glazing along the openings. The cells are reorganized from small to large in size accordingly to their height from the pedestrian's eye level. They are then extruded and reshaped into sharp-edged cells that facilitate the device's form recognition. Each cell is not only a façade element, but an architectural interface where augmented ads are projected on upon detection.

