

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information		
Name	Theodor Reinhardt	
Student number	5619785	
Studio		
Name / Theme	Borders&Territories	
Main mentor	Negar Sanaan Bensi	Architecture, Borders&Territories
Second mentor	Pierre Jennen	Building Technology
Third mentor	Oscar Rommens	Architecture, Borders&Territories
Argumentation of choice of the studio	The B&T Graduation Studio is mostly concerned with territorial, infrastructural and transdisciplinary topics, which greatly corresponds with my personal interest in architecture.	
Graduation project		
Title of the graduation project	Operational Otherness Reassembling Zonefacts and the Zone	
Goal		
Location:	Panama City, Panama	
The posed problem,	Both the Panama Canal Zone and the various Free Trade Zones left highly specific traces in the territory of the Panamanian isthmus. Altering the spatial software, those zones have brought into existence various objects – ‘zonefacts’ (products of the workings of the zone) – which have created a landscape of their own. The nature of these objects, infrastructures, spatial arrangements has been determined by the underlying doctrine for the operation of the zones (primarily military and commercial) and they therefore reflect and optimise the operation of the Zone in its respective doctrine. Simultaneously, being shaped	

	<p>by forces otherwise not present in a territory, they exhibit a degree of otherness, critically disentangling them from the logic of the territory they appear.</p> <p>At the present time, these objects either proliferate the military-commercial operations of Zones, attain mediocre secondary uses that don't make use of their potential or fall into oblivion.</p>
research questions and	<p>How does one operationalize 'zonefacts' – objects, infrastructures and spatial arrangements created by the Zone?</p> <p>Can strategies be developed that make use of the 'zonefacts' and mechanisms of the zones in ways that detach them from their initially conceived purpose, thus taking advantage of specific, complex and highly developed politico-economical systems while simultaneously questioning and problematising them?</p> <p>Can otherness be employed as a consciously crafted tool for critical spatial practice and attain an architectural quality?</p>
design assignment in which these result.	See below
<p>The design assignment centres on the operationalization of infrastructures produced for/by the Panama Canal Zone and various Free Trade Zones on the Panamanian isthmus. More specifically, the focus lies on utilizing existing (both active and inoperational) military and civil communication infrastructures, which are predominantly organized around Ancon Hill.</p> <p>Ancon Hill is a hill, consisting primarily of igneous dacite formations, with an elevation of 186m, making it a natural dominant height overlooking the Pacific approach to the Panama Canal, the city centre of Panama City as well as key locations of the former Panama Canal Zone. Ancon Hill functions as a focal point for various spatial organization in the area, being circumscribed by main transport arteries, housing various governmental institutions as well as a formerly American bunker structure in its interior. The key focus of the research and a defining theme for the design assignment however, centres around the communication infrastructure, from the Canal Zone into the contemporary period, which due to its topographical features plays a central role on the hill.</p> <p>As concluded from the research and mapping exercises, there is a constellation of 3 key points which both significantly shaped the organizational logic of communication infrastructures in the area and thus have been chosen for their generative for the</p>	

project: Corozal, former communication node of the Canal Zone and nowadays focal point for internet submarine cables and tax-free data centres in the region; Utivé, which hosts a satellite ground station which has and still does connect the area to a variety of satellites, predominantly in geostationary orbit and Ancon Hill, which is topped with a variety of antennas, linking various places through microwave networks and which simultaneously is the site of a former US Southern Command bunker installation inside the hill – the former headquarters of the US military command for all of Latin America.

The aim then lies in develop a spatial intervention, that would strategically make use of this constellation, while at the same time diverging from the initial military-commercial doctrine of its operation, while at the same time highlighting this very nature of the infrastructure it is built upon.

Given a condition of informational hyper-connectivity, in combination with a military cold-war era spatial condition aimed at giving shelter in an apocalyptic event, the proposition and assignment is to develop a facility, that would enable a safe and resilient archival and storage of sensitive, valuable and broad amount of data and information, currently existing in the rather fragile digital form. To challenge the militaristic, subjugating and disciplinary forms of governmentality that modern communication infrastructures have historically emerged from, the proposition is to channel these forces into the preservation of knowledge that is shared, open, accessible, discursive, broad, specific and collectively produced; the work of the Wikimedia Foundation.

The facility is aimed to support Wikimedia's currently existing infrastructure in securing the functionality of its network and data processing capabilities, while at the same time provide space for archival programme, which would secure currently digital information on more durable physical data storage. Furthermore, the aim is to develop a system that would ensure a level of redundancy and security, by utilising the strategic communication and possibly other military infrastructure in the territory and beyond.

Process

Method description

[A description of the methods and techniques of research and design, which are going to be utilized.]

The research methods include:

- 1) Reading of theoretical as well as artistic work in engagement with the topic of the Zone with the goal of establishing a novel, nuanced and generative of the concept of the Zone (as a general area of prevailing special conditions).
- 2) Extensive and detailed historical and site-specific research on the Panama Canal Zone, its operation and structure, its regime of exception, the US

military presence and logistics in the region as well as the functionality and legal provisions of the various Free Trade Zones in the region.

- 3) Research into technical aspects of communication technology present in the context as well as their larger historical and geographical contextualization.
- 4) Mapping, a central research tool, which aims at establishing relationships, overlaps, continuities and irregularities in the systems in question, potentially providing key entry points into the spatial investigation and consequently engagement in the context.

The design methods include:

- 1) The aim for the design is to utilise given properties of the infrastructure at hand, yet strategically intervene in key points in order to accommodate the proposed programme.
- 2) The interventions shall aim to both open up, render visible and problematise existing spatial arrangements, but simultaneously employ material compositions that would work towards enunciating the novel use.
- 3) While being inextricably connected to a global dimension by the very nature of the proposed programme, the design project shall nevertheless develop context- and condition-specific, materially situated detailing, which on the one hand employs 'otherness' as an aesthetic quality, but simultaneously does not become dysfunctional in the given context.

Literature and general practical references

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Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

By focusing on the spatial and conceptual workings of the Zone, the project draws a connection to the general topic of the graduation studio - Transient Liquidities along the New Silk Road. It is along this contemporary reinvigoration of the ancient trade route that the idea of the Zone, as a space of exception, as a paradigmatic collapse of global networks into a circumscribed locality, becomes a key politico-economic spatial tool, just as it did centuries ago in the form of Free Ports and merchant cities.

Furthermore, this graduation project is a reflective re-assembly of key topics that I have engaged with in the course of the Master of Science in Architecture and the Built Environment programme at the TU Delft.

[Borders & Territories]

For once, it does address the problem of the transscalar and the territorial; how to operate in a territory that is primarily shaped by a set of dynamic global conditions.

[Architecture & Philosophy; ATP Group]

The relation of the architectural to the territorial then becomes a central problem in formulating a design approach. Furthermore, by drawing closely from and engaging immediately with theoretical (frame)works, it does propose an understanding of architecture as an inextricably discursive-material discipline, where theory and practice cannot be understood as separate entities but rather two sides of the same coin.

[Retroactive Mapping of Data Infrastructures]

Ultimately, one of the key parts of the project is the problematisation of infrastructures, commonly taken to function as a neutral background to life. By tracing the becomings and operations of everyday infrastructures, it does aim at bringing to light politics, power, violence, accumulation, control and other intrinsic characteristics of them.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

By addressing the Zone as a resurfacing, mutating and (unconventional) spatial software, this project, in line with the curriculum of the studio, aims to expand the focus and attention of the architectural discipline beyond its conventional institutional focus. By engaging with spatial conditions that most of the time fall short of the discourse granted to more common readings of architecture, it aims to critically problematise processes which are highly impactful, yet often overlooked or normalized in the production of spaces and territories.