

Figure 1: A 3D architectural rendering of a tropical office building with a complex, multi-tiered roof structure. The building is surrounded by lush greenery and palm trees. The rendering shows the building's facade and the surrounding landscape.

Figure 2: A 3D architectural rendering of a tropical office building, similar to Figure 1, but with a different view or lighting. The building's facade and the surrounding landscape are visible.

Figure 3: A 3D architectural rendering of a tropical office building, similar to Figure 1, but with a different view or lighting. The building's facade and the surrounding landscape are visible.

Figure 4: A 3D architectural rendering of a tropical office building, similar to Figure 1, but with a different view or lighting. The building's facade and the surrounding landscape are visible.

Figure 5: A 3D architectural rendering of a tropical office building, similar to Figure 1, but with a different view or lighting. The building's facade and the surrounding landscape are visible.

Figure 6: A 3D architectural rendering of a tropical office building, similar to Figure 1, but with a different view or lighting. The building's facade and the surrounding landscape are visible.



Figure 3: Integrated Design Process.

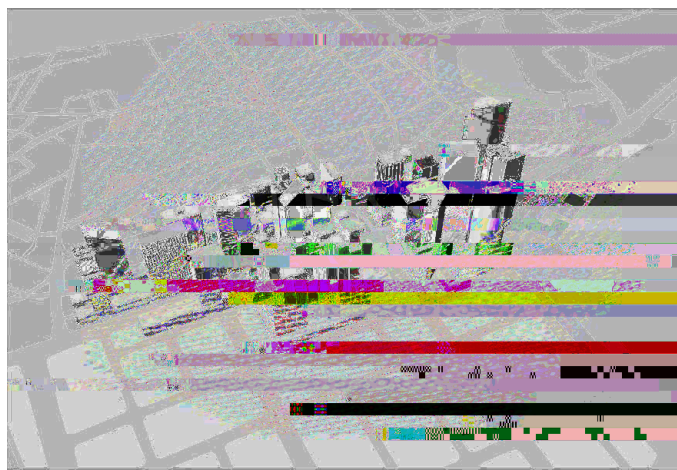


Figure 4: CFD of Singapore CBD.

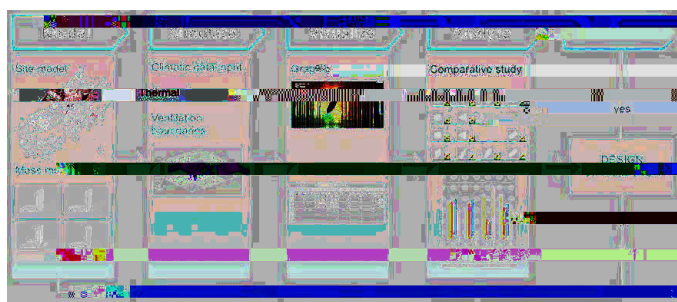


Figure 5: Integrated Work Flow.

On the other hand, the integrated design process is a collaborative process that involves all stakeholders from the beginning to the end of the project. This process allows for the early identification and resolution of potential conflicts and issues, leading to a more efficient and effective design process. The integrated design process also allows for the optimization of the building's performance, taking into account the building's energy consumption, indoor air quality, and occupant comfort. This process is essential for the design of high-performance buildings that are sustainable and resilient in the long term.

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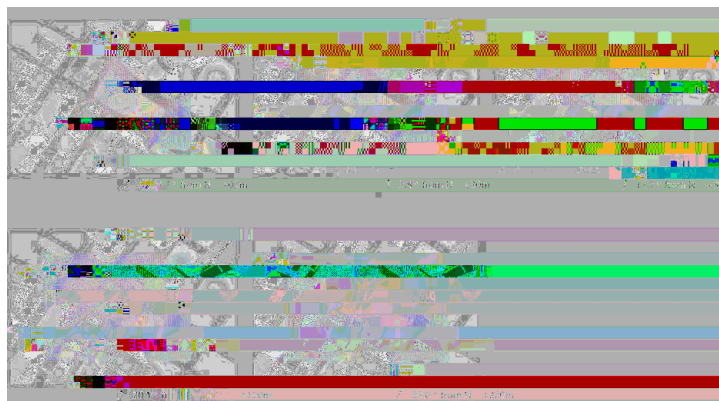


Figure 6: Urban ventilation study by altitude.

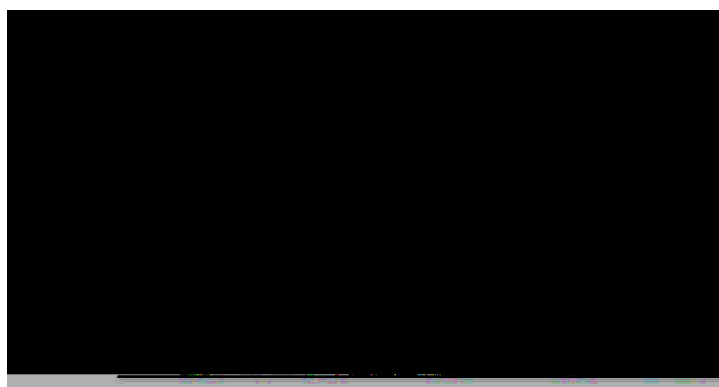


Figure 7: Preliminary Analysis of Form and Wind.

Abstract (Korean text) discussing the study on integrated design workflow for natural ventilated tropical office building using CFD. The text describes the methodology and findings of the study, focusing on the integration of architectural design and computational fluid dynamics (CFD) to optimize natural ventilation in tropical climates.

Introduction (Korean text) discussing the importance of natural ventilation in tropical climates and the role of integrated design workflow in optimizing building performance. The text highlights the challenges of achieving high indoor air quality and energy efficiency in hot and humid environments.

Methodology (Korean text) describing the integrated design workflow used in the study, which combines architectural design, CFD simulation, and optimization techniques. The text details the steps involved in the design process, from conceptual design to final optimization.

Results (Korean text) presenting the findings of the study, including the impact of different design parameters on natural ventilation performance. The text discusses the effectiveness of the integrated design workflow in achieving the desired ventilation goals.

Conclusion (Korean text) summarizing the key findings of the study and the implications for future research and practice. The text emphasizes the importance of integrated design in achieving sustainable and healthy building environments.

References (Korean text) listing the sources used in the study, including academic journals, books, and technical reports. The references provide a foundation for the research and highlight the current state of the field.

Appendix (Korean text) providing additional information related to the study, such as detailed simulation results, design drawings, and data tables. The appendix serves as a supplementary resource for readers interested in the technical details of the research.

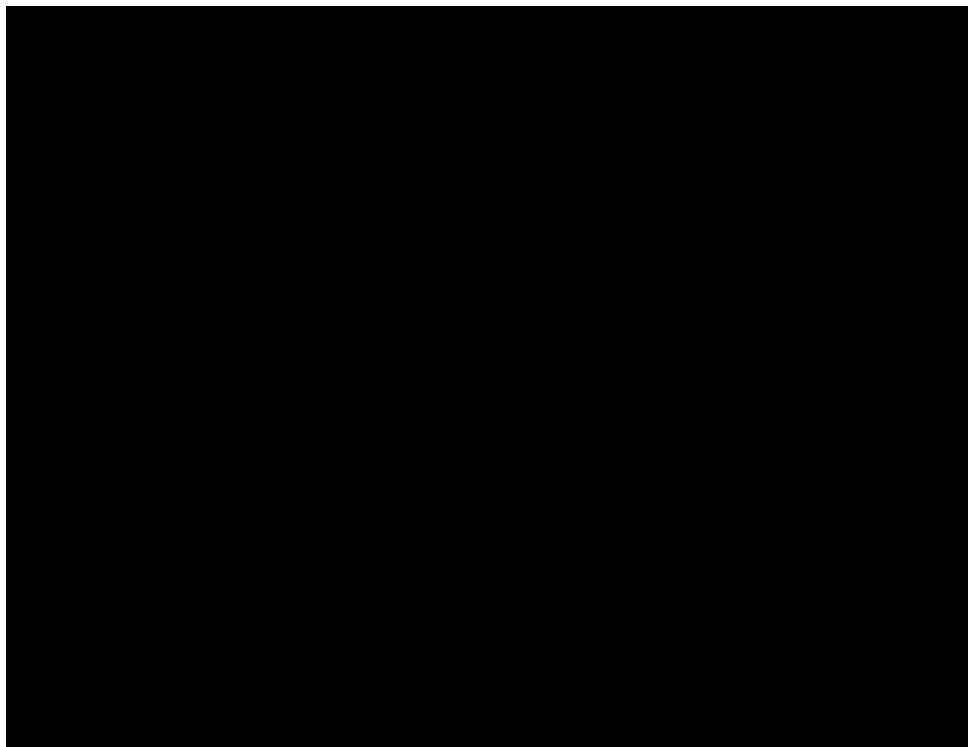


Figure 8: CFD Analysis; Wind.

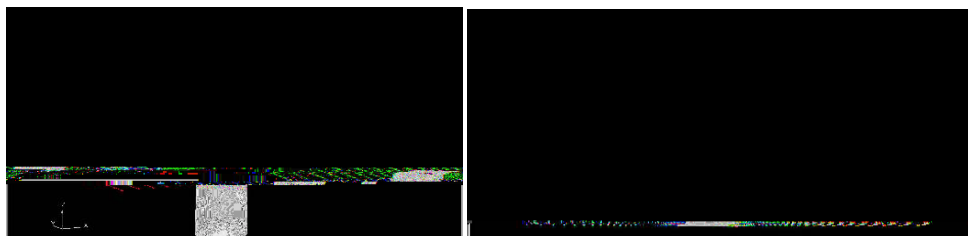


Figure 9: CFD Analysis; Results.

2016, Kim H (2016) Study on Integrated Design Workflow for Natural Ventilated Tropical Office Building Using CFD. J Archit Eng Tech 5: 170. doi: 10.4172/2168-9717.1000170

Conclusion

The study shows that the integrated design workflow for natural ventilated tropical office building using CFD is effective. The results show that the building design can be optimized for natural ventilation and energy efficiency.

The study also shows that the integrated design workflow can be used to optimize the building design for natural ventilation and energy efficiency. The results show that the building design can be optimized for natural ventilation and energy efficiency.

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Acknowledgement

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References

1. Philip O, Dario T, Antony W (2009) Five energy generations of tall buildings: An

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