2025 BLM春季論壇 技術創新-建築自動化的發展及AI/管理上的配套應用

AI技術發展及其在建築規劃設計的應用

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CLUSTER & Associates

[AI 技術發展及其在建築規劃設計應用]

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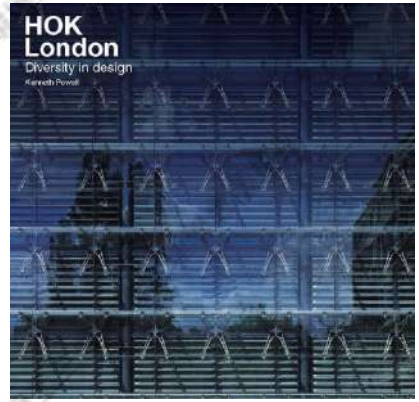
BLM 台灣人居環境全生命週期管理學會

建築師英國學歷

AA School，London

Intermediate Unit2 2007

就業訓練及BIM+參數啟蒙



資訊模型訓練BIM Training: Revit

Revit

參數設計教學訓練Parametric Training: Rhino Explicit History (Grasshopper)

SimplyRhino
sales, training and support
Simply Rhino Training

Rhinoceros®
modeling tools for designers

Rhino

Grasshopper

Paul Wintour

Founder

Paul is a registered architect in New South Wales (#10188) and the United Kingdom (#0787260). He has a detailed understanding of the complexities within the construction industry, having worked extensively in Australia, the United Kingdom, Hong Kong, and The Netherlands.

Paul holds a Masters of Architecture and Urbanism from the Architectural Association's Design Research Laboratory. He has also studied at the Queensland University of Technology and l'ecole d'architecture de Paris Val-de-Seine where he received a Bachelor of Architecture with Honours.

He has taught at the University of Technology Sydney, the University of New South Wales, the Queensland University of Technology, the University of Hong Kong, and the Architectural Association. Paul is also a member of the Australian Institute of Architects (AIA).

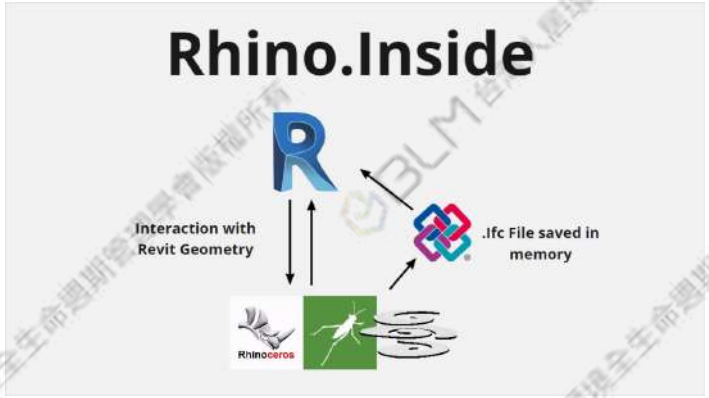
Dynamo Package Development

Dynamo is a node-based visual programming interface developed by Autodesk®. When used in conjunction with Revit, it has the power to generate and manipulate both geometry and data. Parametric Monkey can help automate and accelerate your AEC workflows by developing custom tools to suit your needs. Please note that the scripts are not available via public download and are paid content.

Rhino.Inside Revit Development

Rhino.Inside Revit is an add-on that allows Rhino and Grasshopper to run inside Autodesk Revit®. The technology enables powerful new design workflows and possibilities by bridging the gap between two leading software.

Dynamo



Rhino Inside Revit

Baku Flame Tower

Internet online (Google Search)
Parametric (Rhino，Revit)
Cloud Storage，Remote working
Cloud Apps
AI Service

使用AI的方向

1. 設計的呈現(Render the idea)
2. 設計資訊類(Manage the design in BIM)
3. PM 整合ERP CRM (AI Assistant 協助寫程式)

1. 設計的呈現(Render the idea)

1-1 初期的設計概念視覺化 sketch to Render

1-2 後期的設計確認 Vector to Render

*OPEN Art AI - SDXL (stable diffusion)

*OPEN Art AI - Sketch to 3D (stable diffusion)

*Prompt的草擬 - Image to Prompt by GPT4o-mini

1-3AI工具 - ComfyUI

1. 設計的呈現(Render the idea)

1-1 初期的設計概念視覺化 sketch to Render

客戶示意圖:

客戶期望:
在山上的土地上，蓋斜屋頂的房子，有煙囪冬天可以生火取暖。

1. 設計的呈現(Render the idea)

1-1 初期的設計概念視覺化 sketch to Render

期望:

客戶期望:
日本旅遊時的清水模很好看，最好能搭配一點鐵鏽的呈現時間的軌跡。有流動的感覺，感受到微微的風。

1. 設計的呈現(Render the idea)

1-1 初期的設計概念視覺化 sketch to Render

概念呈現:

客戶回饋:
缺了煙囪，及正面的門

1. 設計的呈現(Render the idea)

1-1 初期的設計概念視覺化 sketch to Render

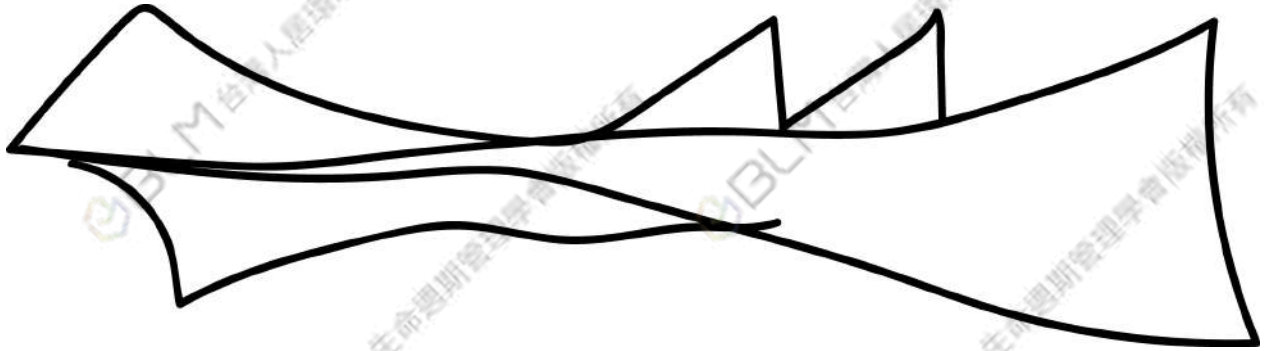
概念呈現:

客戶回饋:
有斜屋頂，煙囪了，但斜屋頂有點老氣

1. 設計的呈現(Render the idea)

1-1 初期的設計概念視覺化 sketch to Render

設計師示意圖:



客戶回饋:
在山上的土地上，有斜屋頂的房子，有煙囪，鐵鏽的呈現時間的軌跡，有流動的感覺，感受到微微的風。

1. 設計的呈現(Render the idea)

1-1 初期的設計概念視覺化 sketch to Render

1. 設計的呈現(Render the idea)

1-2 後期的設計確認 Vector to Render

客戶定案:

平面圖:
空間分配、家具配置、
工程項目及造價確認、
尺寸確認。

1. 設計的呈現(Render the idea)

1-2 後期的設計確認 Vector to Render

客戶定案:

1. 設計的呈現(Render the idea)

1-2 後期的設計確認 Vector to Render

風格色調:

材質色調:
白色及溫暖色調，有點跳色，空間稍微活潑一點

1. 設計的呈現(Render the idea)

1-2 後期的設計確認 Vector to Render

Option 1

stable diffusion

1. 設計的呈現(Render the idea)

1-2 後期的設計確認 Vector to Render

Option 2

stable diffusion

1. 設計的呈現(Render the idea)

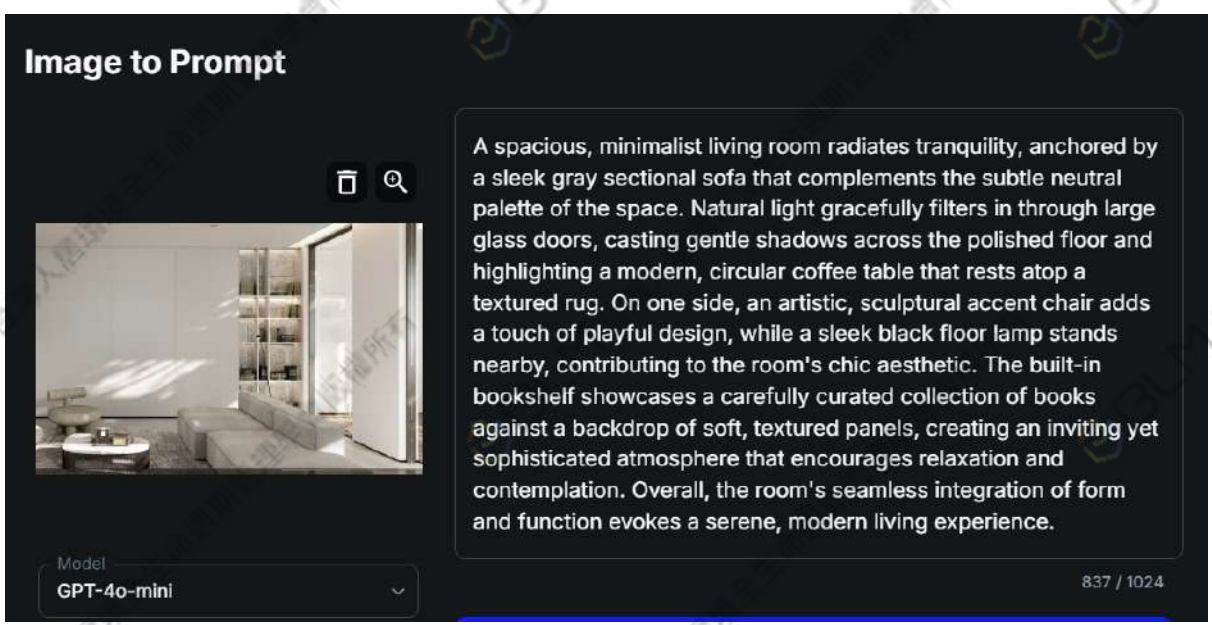
1-2 後期的設計確認 Vector to Render

Option 3

stable diffusion

1. 設計的呈現(Render the idea)

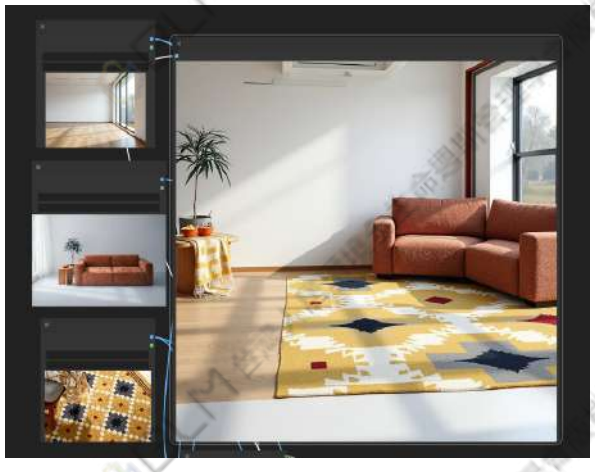
1-2 後期的設計確認 Vector to Render

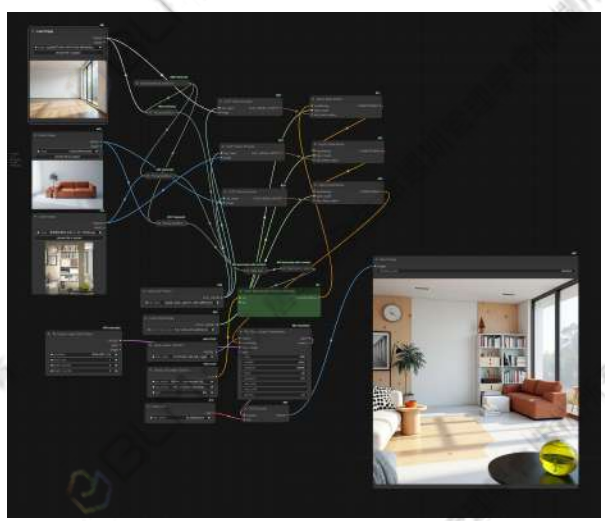


Option 4
Image to Prompt by
GPT4o-mini

1. 設計的呈現(Render the idea)

1-3AI工具 - ComfyUI, Rhino GH Ambrosinus





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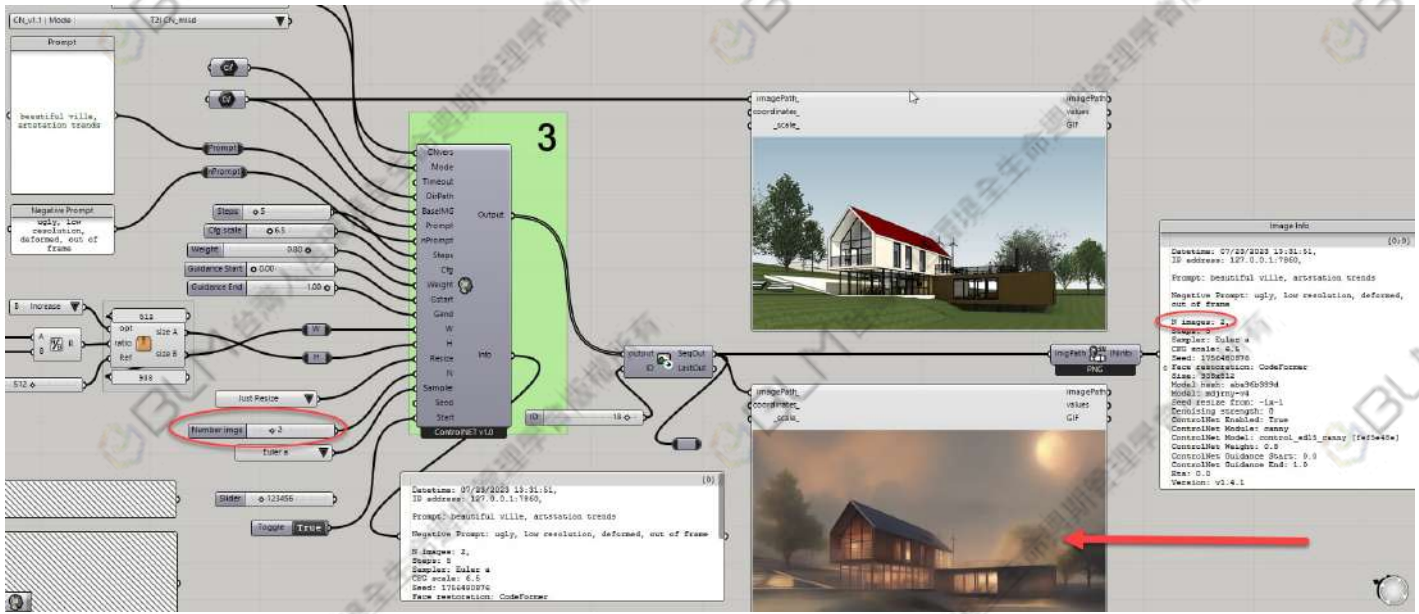
1. 設計的呈現(Render the idea)

1-3AI工具 - ComfyUI, Rhino GH Ambrosinus



Revit Model to Rhino for AI rendering

簡報結束，謝謝

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