A Methodology for Total Hospital Design

by Gerald L. Delon

A procedure is described that integrates three techniques into a unified approach: a computerized method for estimating departmental areas and construction costs, a computerized layout routine that produces a space-relationship diagram based on qualitative factors, and a second layout program that establishes a final layout by a series of iterations. The methodology described utilizes as input the results of earlier phases of the research, with the output of each step in turn becoming the input for the succeeding step. The method is illustrated by application to a hypothetical pediatric hospital of 100 beds.

Fig. 1. Flow diagram of methodology for total hospital design.
Generative Design with Hypar

By Anthony Hauck, Andrew Heumann, and Tyler Goss

Since automated computation became practical more than 50 years ago, professional expertise has become increasingly automated. Codified standards, regulatory frameworks, and statistical analyses have led to services such as WebMD and RocketLawyer, respectively providing common medical and legal advice once confined to human interactions. Neither the medical nor legal professions have vanished, but now many people who had little access to such professional expertise can proceed with more confidence in automated professional expertise superior to previously available advice.

However, with exceptions mostly occurring in academia, until recently software used in the building industry has largely focused on supporting manual accounting (tracking the source and responsibilities of Requests for Information, Field Bulletins, and the like) and the otherwise manual production of specifications and construction drawings. By investing in software to support conventional instruments of service, the software industry distracted building professionals from the work in the 1960s and 1970s that focused on automating architectural expertise to produce viable solutions. The revival of this work in recent years has led to practices commonly referred to as “generative design”.
Users contribute functions in C#, Python, Grasshopper, or Excel.
DEMO

Want to generate a building? Let’s go!
• **Where you can find us**

  • [https://hypar.io](https://hypar.io)

  • [https://github.com/hypar-io/Elements](https://github.com/hypar-io/Elements)

  • [https://docs.hypar.io/](https://docs.hypar.io/)

  • [https://www.youtube.com/c/Hypar/videos](https://www.youtube.com/c/Hypar/videos)

  • [https://twitter.com/HyparAEC](https://twitter.com/HyparAEC)

  • [https://discord.gg/754EHCK](https://discord.gg/754EHCK)